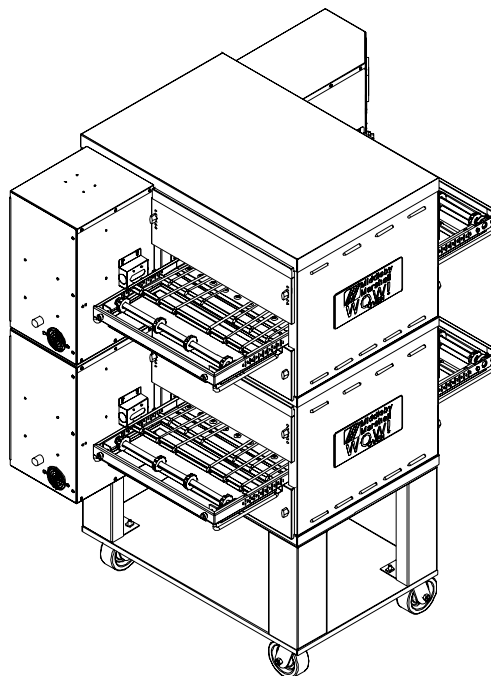
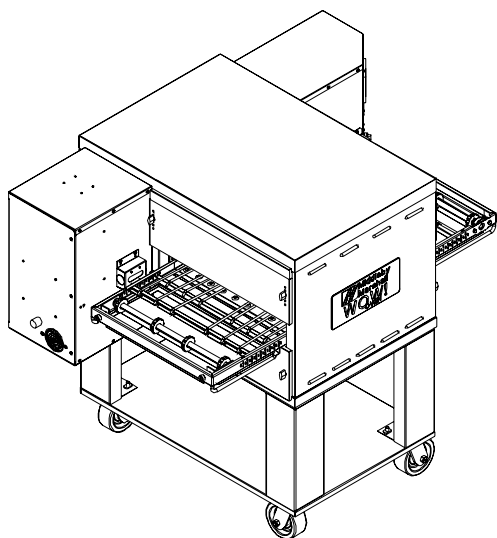


owner's operating & installation manual

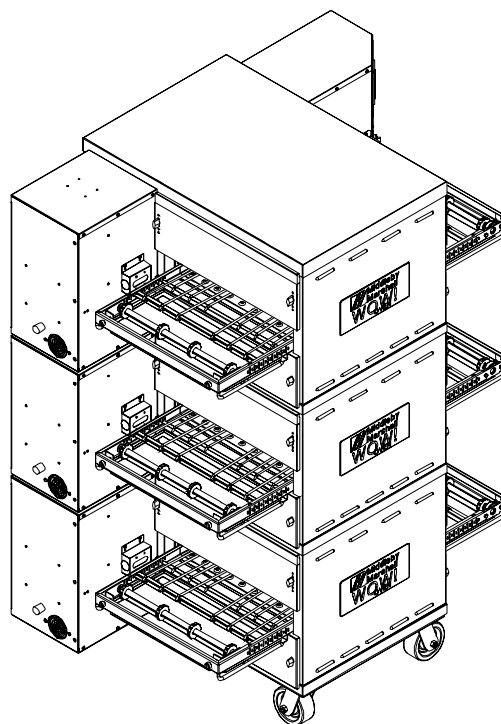
**PS724-Series OVENS
Model PS724E**



PS724 (Double)



PS724 (Single)



PS724 (Triple)



NOTICE:

This Owner's Operating and Installation Manual should be given to the user. The operator of the oven should be familiar with the functions and operation of the oven.

This manual must be kept in a prominent, easily reachable location near the oven.

It is suggested to obtain a service contract with a Middleby Marshall Authorized Service Agent.

WARNING

**FOR YOUR SAFETY, DO NOT STORE OR USE
GASOLINE OR OTHER FLAMMABLE VAPORS AND
LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER
APPLIANCE.**

WARNING

**Improper installation, adjustment, alteration, service, or
maintenance can cause property damage, injury, or
death. Read the installation, operation, and maintenance
instructions thoroughly before installing or servicing this
equipment.**

NOTICE

The warranty is *NOT VALID* **unless** the oven is installed, started, and demonstrated under the supervision of a factory-authorized installer.

NOTICE

Contact your authorized Service Agency to perform maintenance and repairs. A Service Agency Directory is supplied with your oven.

NOTICE

Using any parts other than genuine Middleby Marshall factory-manufactured parts relieves the manufacturer of all warranty and liability.

NOTICE

Middleby Marshall (Manufacturer) reserves the right to change specifications at any time.

**KEEP THIS MANUAL IN A VISIBLE LOCATION NEAR THE OVEN
FOR FUTURE REFERENCE.**

MIDDLEBY MARSHALL
NO QUIBBLE LIMITED WARRANTY
(U.S.A. ONLY)

MIDDLEBY MARSHALL, HEREINAFTER REFERRED TO AS "THE SELLER", WARRANTS EQUIPMENT MANUFACTURED BY IT TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR WHICH IT IS RESPONSIBLE. THE SELLER'S OBLIGATION UNDER THIS WARRANTY SHALL BE LIMITED TO REPLACING OR REPAIRING, AT SELLER'S OPTION, WITHOUT CHARGE, ANY PART FOUND TO BE DEFECTIVE AND ANY LABOR AND MATERIAL EXPENSE INCURRED BY SELLER IN REPAIRING OR REPLACING SUCH PART. SUCH WARRANTY SHALL BE LIMITED TO THE ORIGINAL PURCHASER ONLY AND SHALL BE EFFECTIVE FOR A PERIOD OF ONE YEAR FROM DATE OF ORIGINAL INSTALLATION, OR 18 MONTHS FROM DATE OF PURCHASE, WHICHEVER IS EARLIER, PROVIDED THAT TERMS OF PAYMENT HAVE BEEN FULLY MET.

This warranty is valid only if the equipment is installed, started, and demonstrated under the supervision of a factory-authorized installer.

Normal maintenance functions, including lubrication, cleaning, or customer abuse, are not covered by this **no quibble warranty**.

Seller shall be responsible only for repairs or replacements of defective parts performed by Seller's authorized service personnel. Authorized service agencies are located in principal cities throughout the contiguous United States, Alaska, and Hawaii. This warranty is valid in the 50 United States and is void elsewhere unless the product is purchased through Middleby International with warranty included.

The foregoing warranty is exclusive and in lieu of all other warranties, expressed or implied. There are no implied warranties of merchantability or of fitness for a particular purpose.

The foregoing shall be Seller's sole and exclusive obligation and Buyer's sole and exclusive remedy for any action, including breach of contract or negligence. In no event shall Seller be liable for a sum in excess of the purchase price of the item. Seller shall not be liable for any prospective or lost profits of Buyer.

This warranty is effective on Middleby Marshall equipment sold on, or after, February 15, 1995.

MIDDLEBY MARSHALL INC.
OVEN LIMITED WARRANTY
(Non U.S.A.)

The Seller warrants equipment manufactured by it to be free from defects in material and workmanship for which it is responsible. The Seller's obligation under this warranty shall be limited to replacing or repairing, at Seller's option, without charge, F.O.B. Seller's factory, any part found to be defective and any labor and material expense incurred by Seller in repairing or replacing such part. Such warranty is limited to a period of one year from date of original installation or 15 months from date of shipment from Seller's factory, whichever is earlier, provided that terms of payment have been fully met. All labor shall be performed during regular working hours. Overtime premium will be charged to the Buyer.

This warranty is not valid unless equipment is installed, started, and demonstrated under the supervision of a factory-authorized installer.

Normal maintenance functions, including lubrication, adjustment of airflow, thermostats, door mechanisms, microswitches, burners and pilot burners, and replacement of light bulbs, fuses and indicating lights, are not covered by warranty.

Any repairs or replacements of defective parts shall be performed by Seller's authorized service personnel. Seller shall not be responsible for any costs incurred if the work is performed by other than Seller's authorized service personnel.

When returning any part under warranty, the part must be intact and complete, without evidence of misuse or abuse, freight prepaid.

Seller shall not be liable for consequential damages of any kind which occur during the course of installation of equipment, or which result from the use or misuse by Buyer, its employees or others of the equipment supplied hereunder, and Buyer's sole and exclusive remedy against Seller for any breach of the foregoing warranty or otherwise shall be for the repair or replacement of the equipment or parts thereof affected by such breach.

The foregoing warranty shall be valid and binding upon Seller if and only if Buyer loads, operates and maintains the equipment supplied hereunder in accordance with the instruction manual provided to Buyer. Seller does not guarantee the process of manufacture by Buyer or the quality of product to be produced by the equipment supplied hereunder and Seller shall not be liable for any prospective or lost profits of Buyer.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER. SPECIFICALLY THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

The foregoing shall be Seller's sole and exclusive obligation and Buyer's sole and exclusive remedy for any action, whether in breach of contract or negligence. In no event shall seller be liable for a sum in excess of the purchase price of the item.

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NOTE

Wiring Diagrams are in Section 6 of this Manual.
The diagram for each oven is also inside the left
side control box door.

SECTION 1 DESCRIPTION

I. MODEL IDENTIFICATION

The Middleby Marshall PS724-Series may be used either as a single oven or stacked for use as double or triple ovens.

A single PS724-Series Oven (Figure 1-1) can be mounted on an insulated base with short legs for countertop use, or on a leg stand with a lower shelf and casters for a free standing unit. A double oven (Figure 1-2) consists of two, *stacked*, single ovens. A triple oven (Figure 1-3) consists of three stacked single ovens. The lower oven is mounted on an insulated base with casters affixed.

On a double or triple oven, the ovens operate independently. All ovens use identical controls and components. One oven can be cleaned or serviced, while the others are operating.

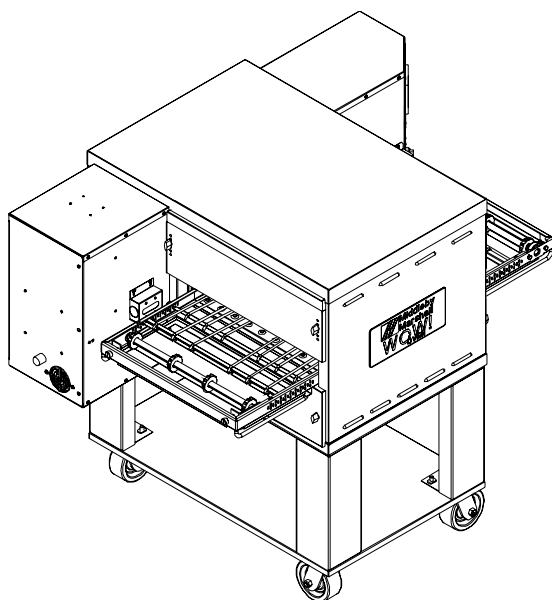


Figure 1-1. Single PS724 Oven

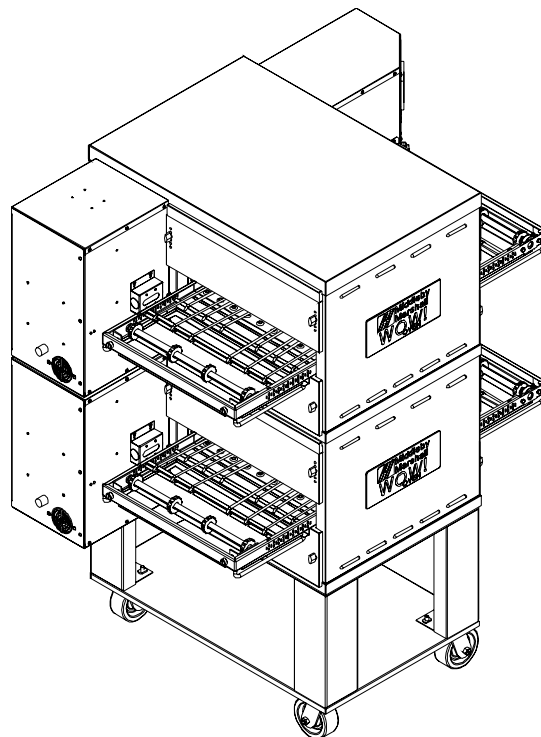


Figure 1-2. Double PS724 Oven

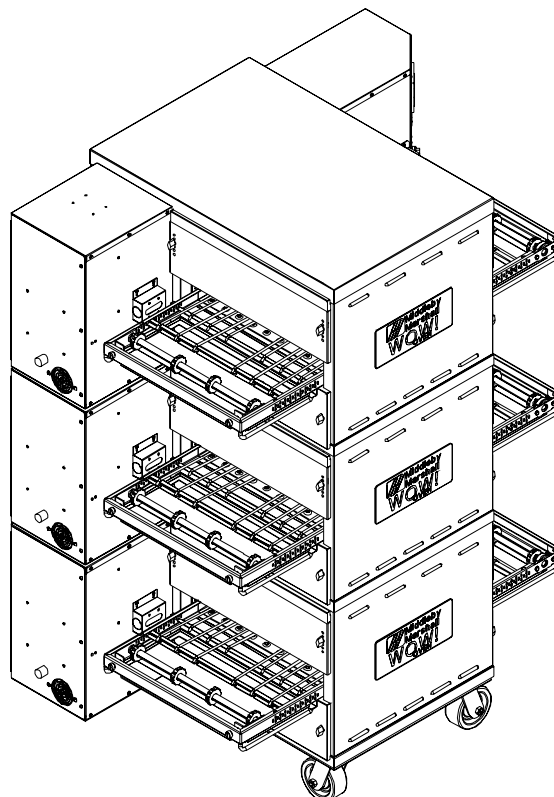


Figure 1-3. Triple PS724 Oven

SECTION 1 DESCRIPTION

PS724 SERIES OVEN SPECIFICATIONS

| | |
|--|---|
| Conveyor Belt Width | 18.00" (457 mm) |
| Heating Zone Length | 24.00" (610 mm) |
| Baking Area Square Feet | 3.0 sq. ft. (0.28 m ²) |
| Overall Dimension – Standard Single Oven w/Legs - 8" Exit tray Installed | 64.00" (1625 mm) L x 36.00" (914 mm) W x 43.69" (1110 mm) H x |
| Overall Dimension – Double Oven | 64.00" (1625 mm) L x 36.00" (914 mm) W x 64.00" (1625 mm) H x |
| Overall Dimension – Triple Oven | 64.00" (1626 mm) L x 36.00" (914 mm) W x 69.25" (1759 mm) H x |
| Weight of Single Oven | 250 lb (93.3 kg) |
| Shipping Weight | 360 lb (163.3 kg) |
| Shipping Cube | 61.1 ft ³ (1.73 m ³) |
| Operating Range | 17.4 kW/hr |
| Maximum Operating Temperature | 600°F (316°C) |
| Warm-up Time | 20 min. |
| Belt Speed Limits | 0.30 - 12:00 |

SERIES PS724 ELECTRICAL SPECIFICATIONS

DOMESTIC OVENS

| VOLTAGE | PHASE | HZ | kW | WIRING | BREAKER SIZE | POWER CORD SPECIFICATION | POWER PLUG |
|---------|-------|-------|----------|------------------------------|--------------|--------------------------|-------------|
| 208 | 3 | 60 | 14.4 STD | 4-WIRE / L1,L2,L3 & GROUND | 50 A | 8 GA, 4-WIRE | NEMA 15-50P |
| | 3 | 50-60 | 17.4 OPT | 4-WIRE / L1,L2,L3 & GROUND | 60 A | 6 GA, 4-WIRE | NEMA 15-60P |
| 240 | 3 | 60 | 14.4 STD | 4-WIRE / L1,L2,L3 & GROUND | 50 A | 8 GA, 4-WIRE | NEMA 15-50P |
| | 3 | 60 | 17.4 OPT | 4-WIRE / L1,L2,L3 & GROUND | 60 A | 6 GA, 4-WIRE | NS |
| 480 | 3 | 60 | 17.4 STD | 5-WIRE / L1,L2,L3,N & GROUND | 30 A | 8 GA, 5-WIRE | NS |

INTERNATIONAL OVENS

| VOLTAGE | PHASE | HZ | kW | WIRING | BREAKER SIZE | POWER CORD SPECIFICATION | POWER PLUG |
|---------|-------|-------|-----------------|------------------------------|--------------|--------------------------|------------|
| 208 | 3 | 50-60 | 17.4 OPT | 4-WIRE / L1,L2,L3 & GROUND | 60 A | 6 GA, 4-WIRE - NS | NS |
| | 3 | 50-60 | 14.4 STD | 4-WIRE / L1,L2,L3 & GROUND | 50 A | 8 GA, 4-WIRE - NS | NS |
| 230-240 | 3 | 50-60 | 16 / 17.4 OPT | 4-WIRE / L1,L2,L3 & GROUND | 60 A | 6 GA, 4-WIRE - NS | NS |
| | 3 | 50-60 | 13.2 / 14.4 STD | 4-WIRE / L1,L2,L3 & GROUND | 50 A | 8 GA, 4-WIRE - NS | NS |
| 380 | 3 | 50-60 | 17.4 STD | 5-WIRE / L1,L2,L3,N & GROUND | 40 A | 10 GA, 4-WIRE - NS | NS |
| 400-416 | 3 | 50-60 | 16.1 / 17.4 STD | 5-WIRE / L1,L2,L3,N & GROUND | 35 A | 6 GA, 5-WIRE - NS | NS |

STD = Standard

OPT = Optional

NS = Not Supplied

NOTE

Wiring Diagrams are contained in Section 6 of this Manual and are also located inside inside the left side control box door. Additional electrical information is provided on the oven's serial plate.

This Manual Must Be Kept For Future Reference.

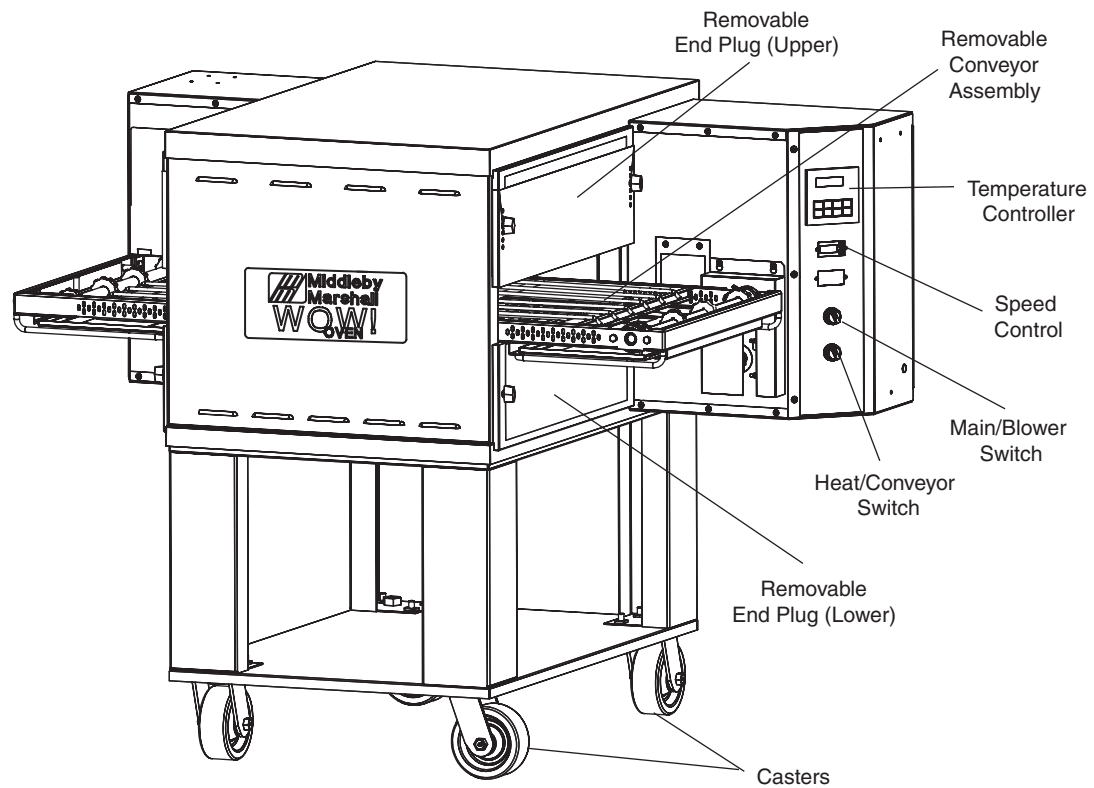


Figure 1-4. PS724-Series Oven Components Locations

SECTION 1 DESCRIPTION

II. COMPONENT FUNCTION (Figure 1-4)

A. Conveyor Motor and Conveyor Belt

The conveyor belt is driven by a variable-speed electric motor (Figure 1-5) operating through a gear reducer. The motor speed is controlled by a digital control. The stainless-steel wire belt can travel in either direction at variable rates ranging from 30 seconds to 12 minutes; this is the time that a product can take to pass through the oven.

B. Blower Fan

The circulation air blower drive motors (2) are located in the right side control box. The blowers force heated air through the air fingers. The MAIN / BLOWER switch must be set to "ON" or "I" for oven warmup and baking.

C. Cooling Fan — See Figure 1-5 and Figure 1-6

Cooling fans are located at the rear of each (left and right) control box. Cooling air is drawn into each control box and blown across the control components and circulating blower bearings and exits the oven front and rear louvers.

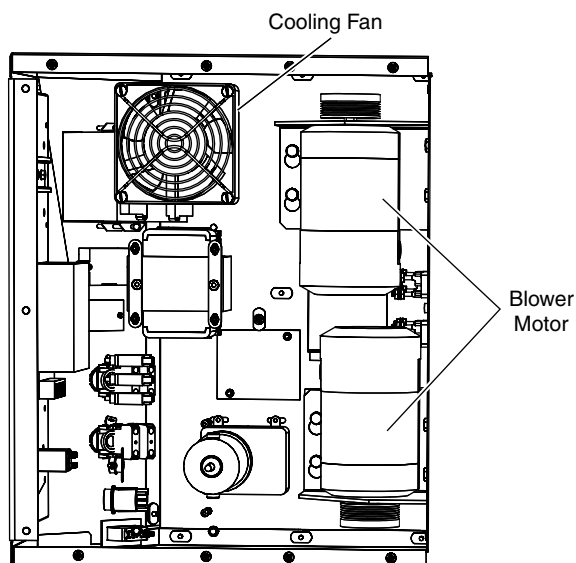
IMPORTANT

THE CONTROL BOX DOORS MUST BE CLOSED WHILE THE OVEN IS HOT OR HEATING IN ORDER TO KEEP THE COMPONENTS AND BEARINGS COOL.

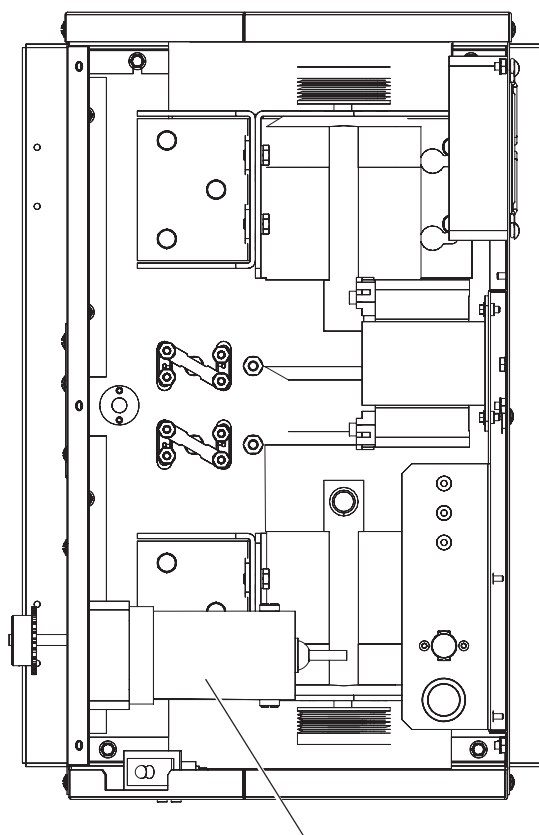
D. Air Fingers - See Figure 1-7

An Air Finger Assembly is made up of three parts:

1. **Outer Plate** - The Outer Plate is the removable covering with tapered holes, which direct the air stream onto the product being baked.
2. **Inner Plate** - The perforated Inner Plate is vital in forming the unique air jets. It must be assembled into the manifold with its holes aligned with the holes of the outer plate.
3. **Manifold** - The Manifold is the assembly which slides on tracks into the oven plenum.



Blower Assembly



Conveyor
Drive Motor

Right Control Box

**Figure 1-5. Machinery Compartment
Components**

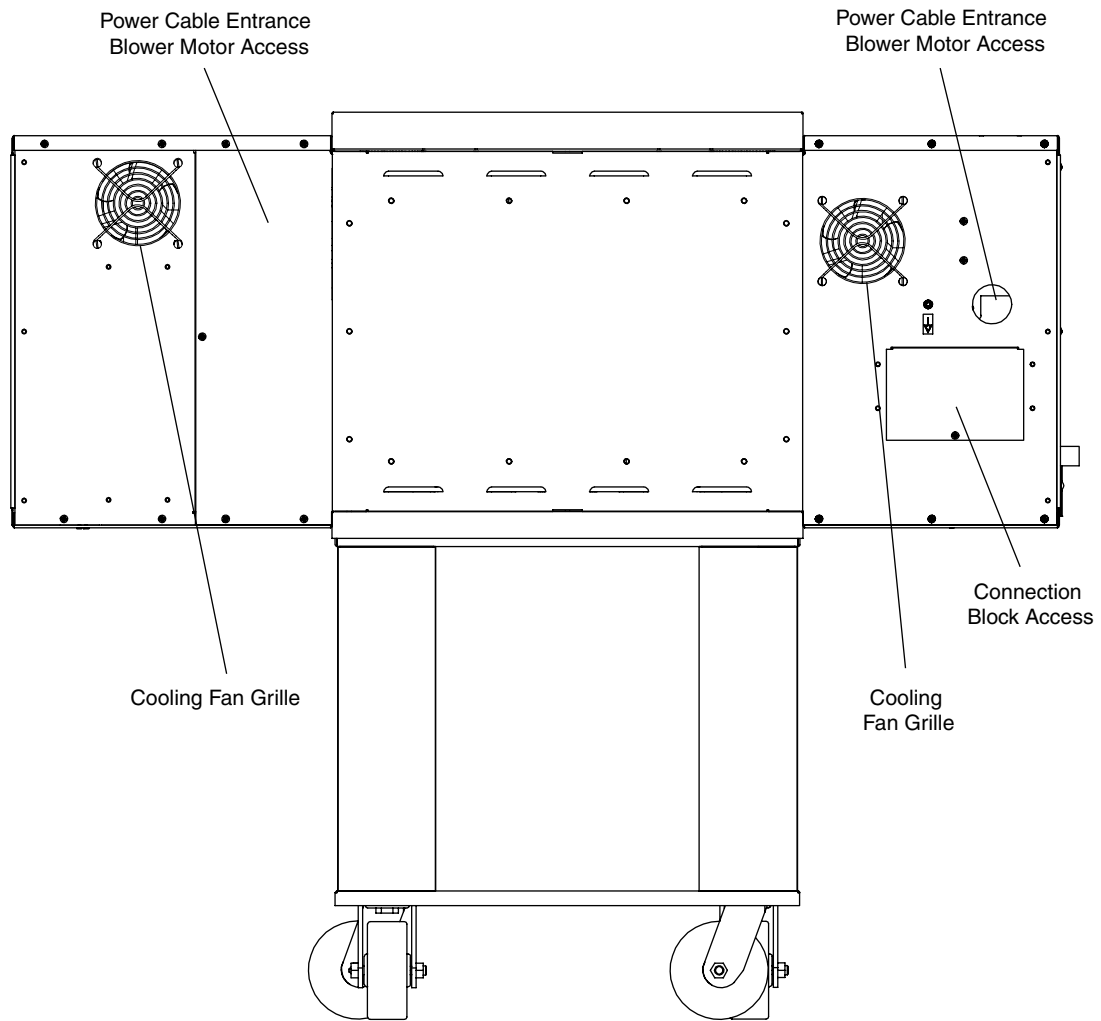


Figure 1-6. Cooling Fan

SECTION 1
DESCRIPTION

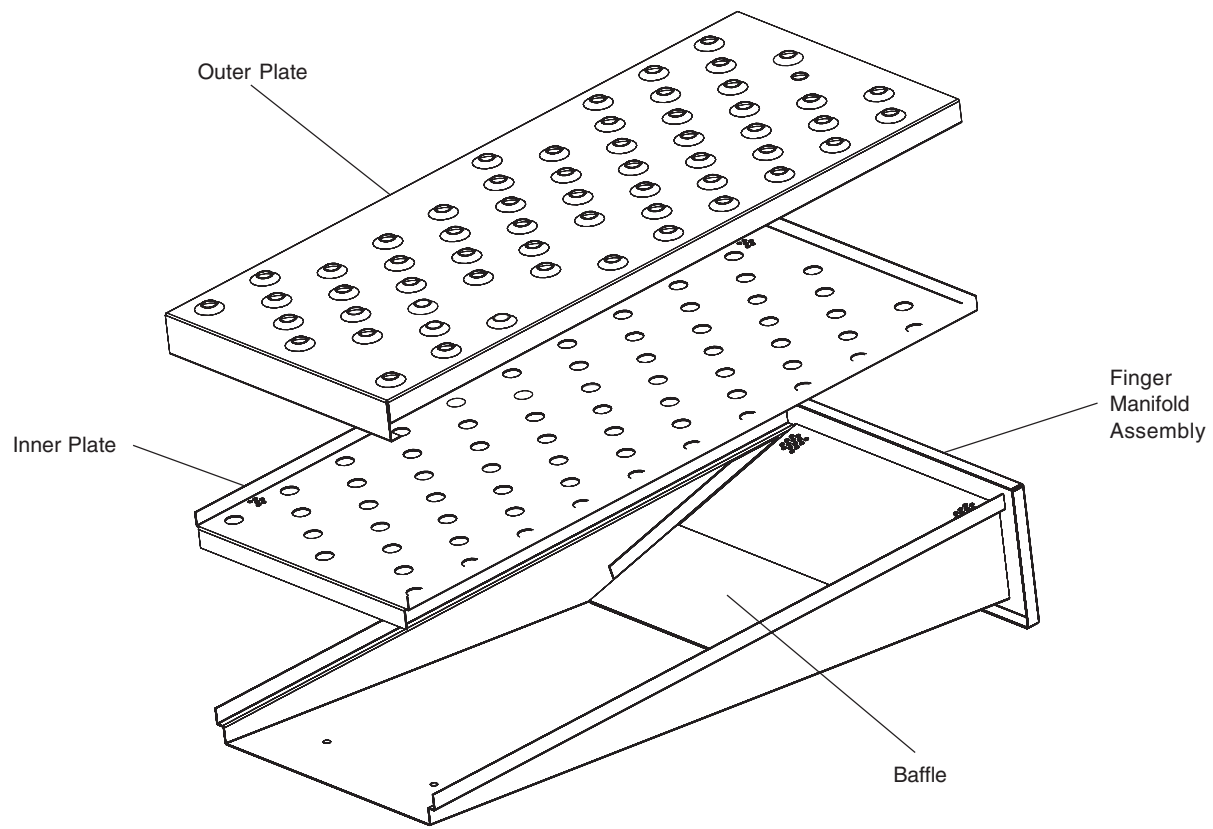


Figure 1-7. Air Finger.

SECTION 2 INSTALLATION

SECTION 2 INSTALLATION

WARNING

The oven must be installed on an even (level) non-flammable flooring and any adjacent walls must be non-flammable. Recommended minimum clearances are specified in the *Description* section of this Manual.

WARNING

Do not obstruct the flow of combustion and ventilation air to and from your oven. There must be no obstructions around or underneath the oven. Constructional changes to the area where the oven is installed shall not affect the air supply to the oven.

CAUTION

For additional installation information, contact your local Authorized Service Agent.

NOTE

There must be adequate clearance between the oven and combustible construction. Clearance must also be provided for servicing and for proper operation.

NOTE

An electrical wiring diagram for the oven is located inside the machinery compartment.

NOTE

All aspects of the oven installation, including placement, utility connections, and ventilation requirements, must conform with any applicable local, national, or international codes. These codes supersede the requirements and guidelines provided in this manual.

NOTE

In the USA, the oven installation must conform with local codes. Installed ovens must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code (NEC), or ANSI/NFPA70.

NOTE - CANADA INSTALLATION

In Canada, the oven installation must conform with local codes. Installed ovens must be electrically grounded in accordance with local codes, or in the absence of local codes, with the Canadian Electrical Code CSA C22.2.

NOTE - AUSTRALIA INSTALLATION

In Australia, the oven installation must conform with any requirements of the appropriate statutory authority.

NOTE - CE OVEN INSTALLATION

Four casters are provided to allow the oven to be more easily moved to the installation location. These casters are intended to simplify pre-installation movement only, and are NOT suitable for use as part of a CE oven installation. During the installation procedure, the casters MUST be removed, so that the oven can be supported by the supplied 152mm adjustable legs.

SECTION 2 INSTALLATION

NOTE: The oven, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code (NEC), or ANSI/NFPA70.

NOTE

There must be adequate clearance between the oven and any adjacent combustible construction. Clearance must also be provided for servicing and for operation.

CAUTION

It is recommended that the oven be placed under a ventilation hood for adequate air supply and ventilation.

CAUTION

Do not obstruct the flow of ventilation air to and from your oven. Do not obstruct the fan holes in the rear of the unit.

I. UNLOADING

Your Middleby Marshall PS724-Series Oven is shipped partially assembled. It will arrive in a carton on a crate.

Carton size for a PS724-Series Oven is:

56.3" (1422 mm) Long ×

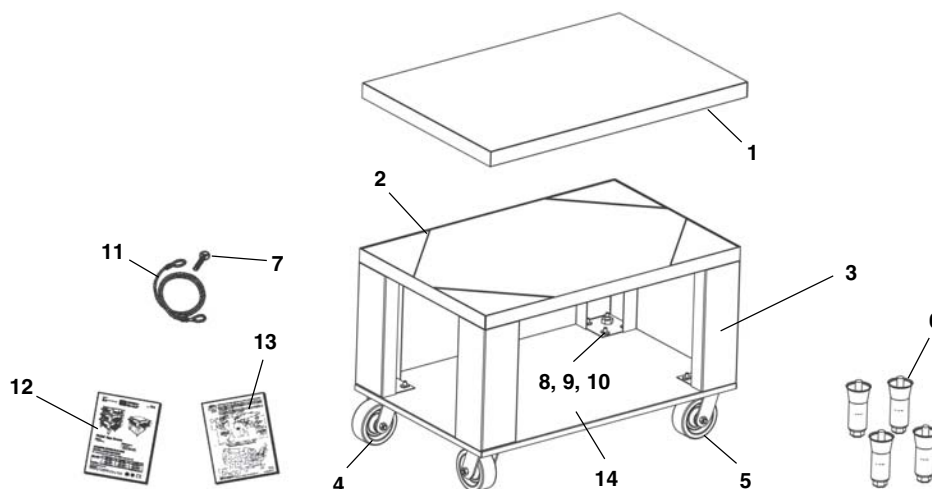
41" (1041 mm) Wide ×

40" (1013 mm) High

The crate and carton must be examined before signing the Bill of Lading. Report any visible damage to the transport company, and check for the proper number of crates. If apparent damage is found, make arrangements to file a claim against the carrier. Surface Interstate Commerce Regulations (U.S.A.) require that the claim must be initiated by the consignee within 10 days from the date that the shipment is received.

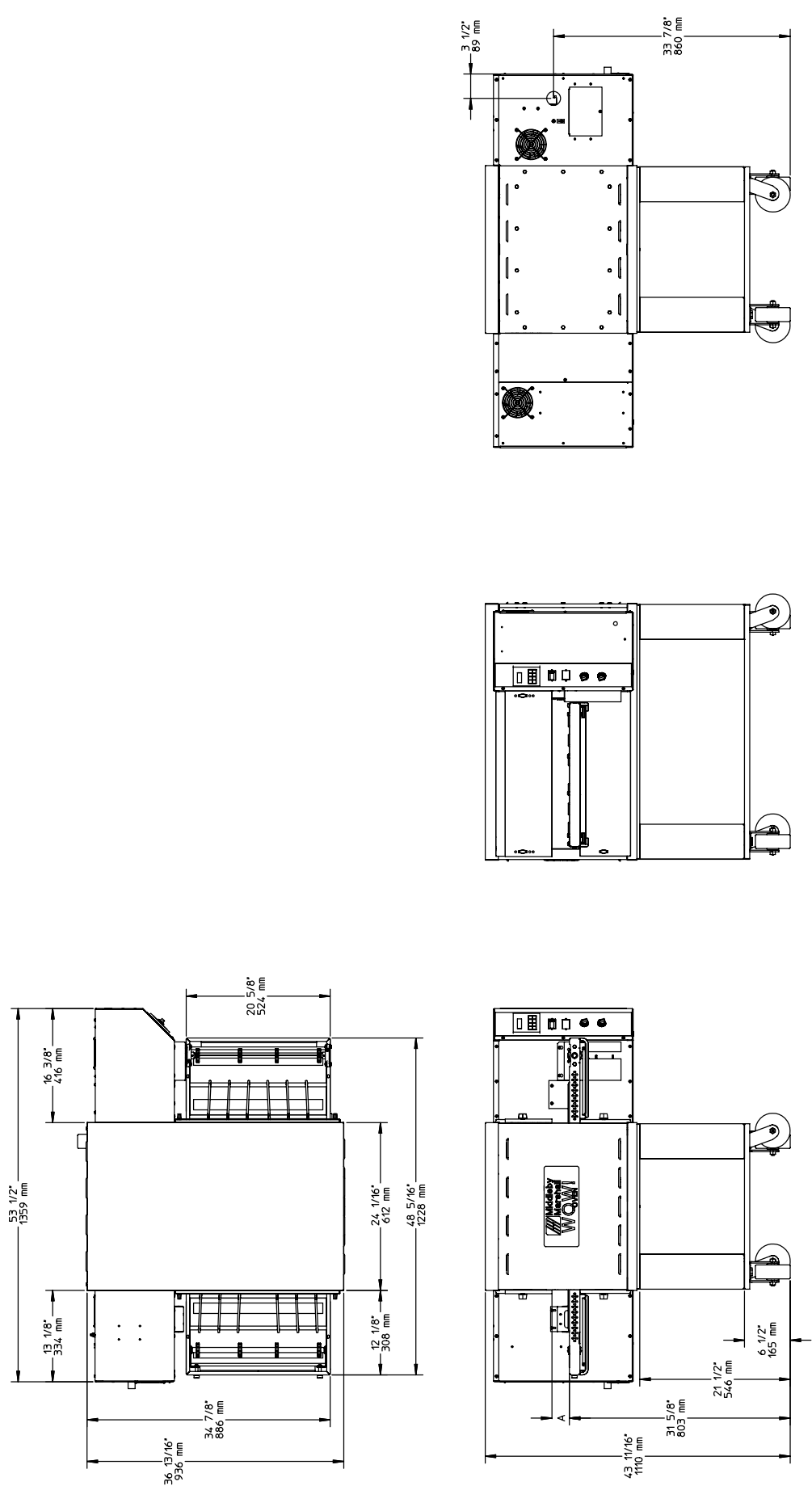
**PS624/724/824 OVEN INSTALLATION
REQUIRED KITS AND EQUIPMENT**

| TYPE OF INSTALLATION | PS624/724/824 Single Oven Installation Kit P/N 61227 61326 (CE) | PS624/724/824 Double Oven Installation Kit P/N 61286 61327 (CE) | PS624/724/824 Triple Oven Installation Kit P/N 61287 61328 (CE) | PS624/724/824 Counter Installation Kit P/N 61329 |
|-------------------------|--|--|--|--|
| Single Oven | 1 | | | 1 |
| Double Oven | | 1 | | NA |
| Triple Oven | | | 1 | NA |



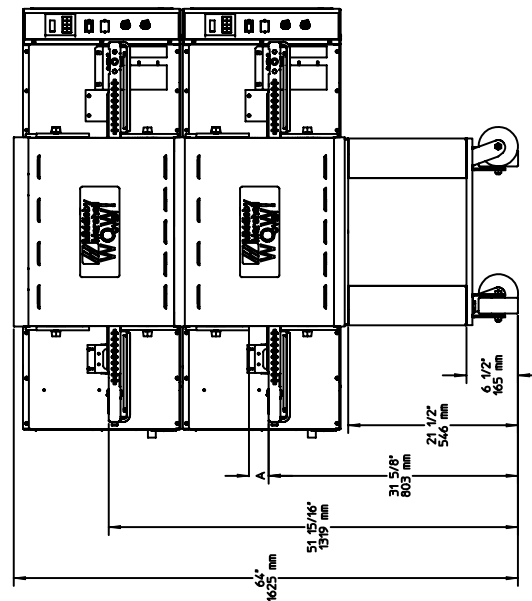
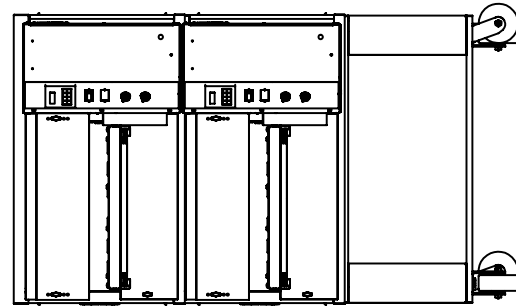
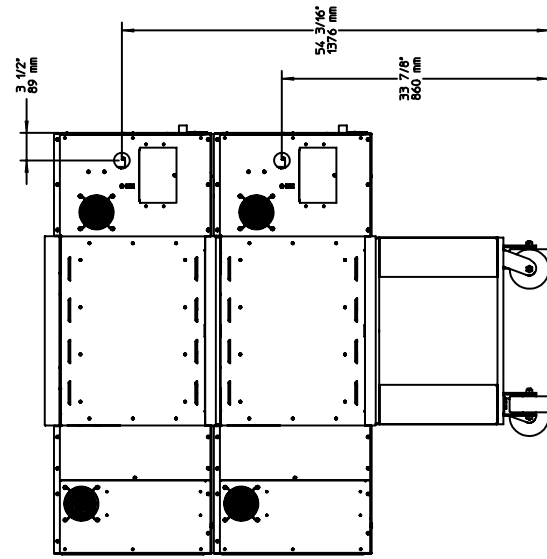
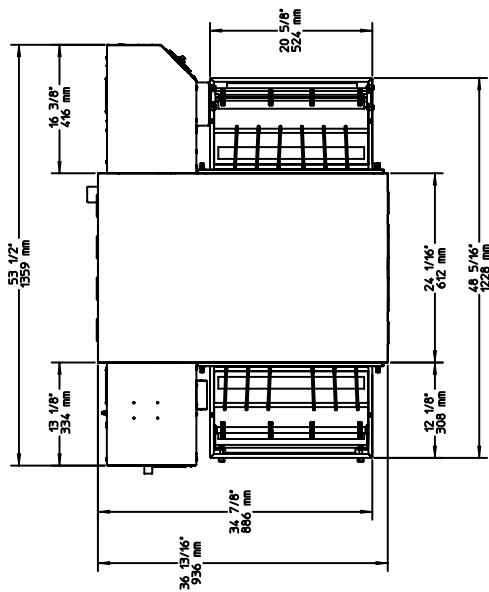
| Item | Qty. Single Oven | Qty. Double Oven | Qty. Triple Oven | Part No. | Inc. with domestic ovens? | Inc. with CE ovens? | Description |
|---|------------------------|------------------------|------------------------|------------|---------------------------------|---------------------------|--|
| 1 | 1 | 1 | 1 | 61243 | Yes | Yes | Base pad |
| 2 | 2 | 2 | 2 | 59835 | Yes | Yes | Top panel |
| 3 | 4 | 4 | -- | 37900-0024 | Yes | Yes | 15" (381mm) leg extension, for single and double ovens |
| 4 | 2 | 2 | 2 | 22290-0009 | Yes | Yes | Caster, with flat plate and brake |
| 5 | 2 | 2 | 2 | 22290-0010 | Yes | Yes | Caster, with flat plate (no brake) |
| NOTE: Domestic and standard export ovens include 2 braking casters (item 5) and 2 non-braking casters (Item 6). CE-approved ovens include 4 non-braking casters (Item 6) SOLELY for the purpose of moving the oven to the installation location. Casters are NOT suitable for use as part of CE oven installations. Refer to the notice on the preceding page. | | | | | | | |
| 6 | 4 | 4 | 4 | 22450-0028 | No | No | Leg, adjustable, 6" (152mm) |
| 7 | 1 | 1 | 1 | 21392-0004 | Yes | Yes | Eyebolt, 3/4" |
| 8 | A/R | A/R | A/R | 220373 | Yes | Yes | Hex bolt, 3/8"-16 x 1" |
| NOTE: CE-approved ovens include 32 hex bolts. Domestic and standard export ovens include 31 hex bolts and one eyebolt (item 8) that acts as an anchor for the restraint cable (Item 12). CE ovens are mounted on legs (Item 7) and do not use a restraint cable. | | | | | | | |
| 9 | 32 | 32 | 32 | 21416-0001 | Yes | Yes | Flat washer, 3/8" |
| 10 | 32 | 32 | 32 | 21422-0001 | Yes | Yes | Lockwasher, 3/8" |
| 11 | 1 | 1 | 1 | 22450-0228 | Yes | Yes | Restraint cable assembly |
| 12 | 1 | 1 | 1 | 61778 | Yes | Yes | Owner's Operating and Installation Manual |
| 13 | 1 | 1 | 1 | 1002040 | Yes | Yes | Authorized Service Agency Listing |
| 14 | 1 | 1 | -- | 61226 | Yes | Yes | Lower shelf |

Figure 2-1. PS724-Series Electric Oven Installation Kit



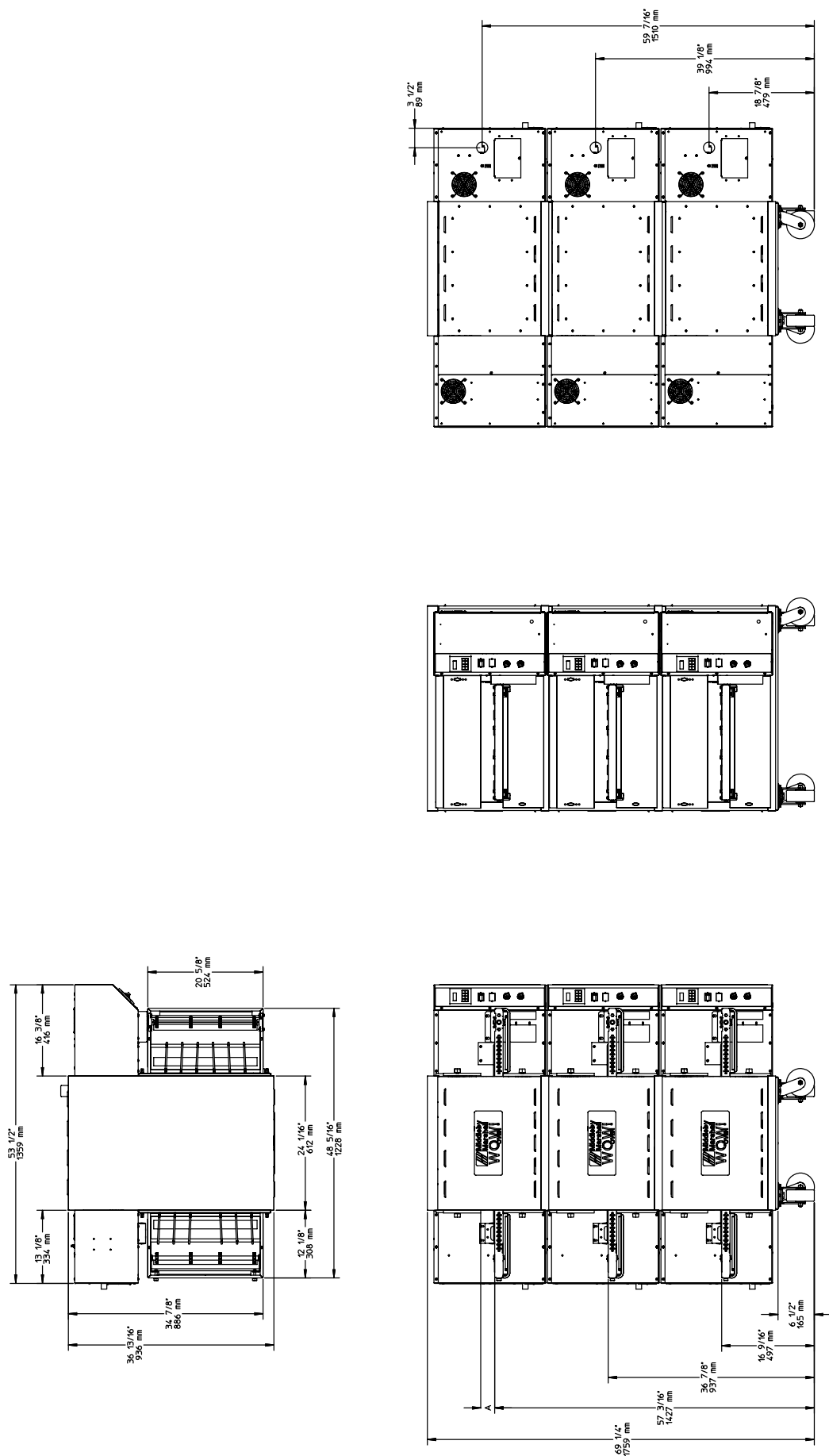
DIM A - ENTRANCE AND EXIT OPENING HEIGHTS ARE ADJUSTABLE FROM 2.25" (57mm) TO 3.75" (95mm) IN 1/2" (12.7mm) INCREMENTS

Figure 2-5. MODEL PS724 SINGLE OVEN DIMENSIONS



DIM A - ENTRANCE AND EXIT OPENING HEIGHTS ARE ADJUSTABLE FROM
2.25" (57mm) TO 3.75" (95mm) IN 1/2" (12.7mm) INCREMENTS

Figure 2-6. MODEL PS724 DOUBLE OVEN DIMENSIONS



DIM A - ENTRANCE AND EXIT OPENING HEIGHTS ARE ADJUSTABLE FROM 2.25" (57mm) TO 3.75" (95mm) IN 1/2" (12.7mm) INCREMENTS

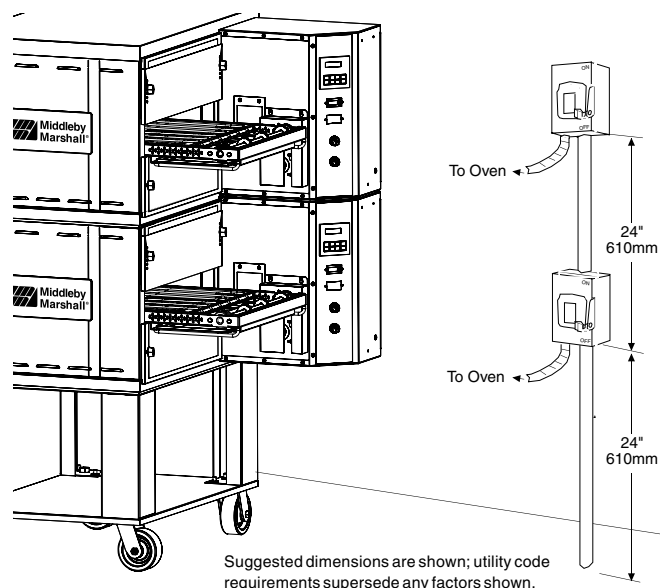
Figure 2-7. MODEL PS724 TRIPLE OVEN DIMENSIONS

UTILITY ROUGH-IN DIMENSIONS AND POSITIONING FOR PS724-SERIES OVENS

WARNING
DO NOT USE CONDUIT FOR
GROUND CONNECTION.

CAUTION
*IT IS RECOMMENDED THAT THE OVEN
BE PLACED UNDER A VENTILATION
HOOD FOR ADEQUATE AIR SUPPLY
AND VENTILATION.*

**ELECTRIC SUPPLY TO BE
PROVIDED BY CUSTOMER**



**Figure 2-9. Typical PS724-Series Oven(s)
Installation**

CIRCUIT BREAKER

A separate circuit breaker with lockout/tagout electrical shutoff is required for each, separately wired oven.

See breaker sizing requirements below:

ELECTRICAL SPECIFICATIONS

NOTE: Please refer to page 2, Electrical Specifications chart and your units data plate information, for more detailed information.

DOMESTIC: 208V, 60 Hz, 14.4 kW, 50A Service

240V, 60 Hz, 14.4 kW, 50A Service

480V, 60 Hz, 14.4 kW, 25A Service

Do NOT use conduit for ground.

or

EXPORT: CE MODEL

208V, 50/60 Hz, 14.4 kW, 50A Service

230-240V, 50/60Hz, 13.2/14.4 kW, 50A Service

380V, 50/60 Hz, 14.4 kW, 25A Service

Do NOT use conduit for ground.

POWER RATING

14.4 kW Standard

17.4 kW Optional

SUPPLY WIRE

Supply wire size must be in accordance with the National Electrical Code (current edition) and must be in compliance with local codes.

SUGGESTED

If space permits, service should be located near the control console end of the oven(s) to allow convenient access to safety switches.

II. VENTILATION GUIDELINES

Use of a ventilation hood is not required for proper operation, but installation must conform with all local codes and regulations.

Local codes and conditions vary greatly from one area to another and must be complied with. Following are the suggested requirements for good ventilation. Please remember these are recommendations or guidelines, you may have a special condition or problem that will require the services of a ventilation engineer or specialist. Proper ventilation is the oven owner's responsibility. Improper ventilation can inhibit oven performance.

SECTION 2 INSTALLATION

III. ELECTRICAL CONNECTION INFORMATION FOR PS724-SERIES OVENS.

WARNING

Authorized supplier personnel normally accomplish the connections for the ventilation system, electric and gas supplies, as arranged by the customer. Following these connections, the factory-authorized installer can perform the initial startup of the oven.

Check the oven data plate (Figure 2-10) before making any electric supply connections. Electric supply connections must agree with data on the oven data plate.

NOTE: The electric supply installation must satisfy the requirements of the appropriate statutory authority, such as the National Electrical Code (NEC), ANSI/NFPA70, (U.S.A.); the Canadian Electrical Code, CSA C22.2; the Australian Code AG601; or other applicable regulations.

A fused disconnect switch or a main circuit breaker (customer furnished) **MUST** be installed in the electric supply line for each oven; it is recommended that this switch/circuit breaker have lockout/tagout capability. The electric supply connection must meet all national and local electrical code requirements. Copper is the recommended material for the electrical supply conductors.

IV. ELECTRIC SUPPLY

Electrical connection is made through a cord and plug. A cord, plug and strain relief is supplied for Domestic oven models, only. International ovens must supply, See Electrical Specifications chart on page 2.

The supply conductors must be of the size and material (copper) recommended to provide the current required; (refer to the data plate for the ampere specifications). The electric current rating for each conductor supplying a PS724-Series Oven is 1.5A.

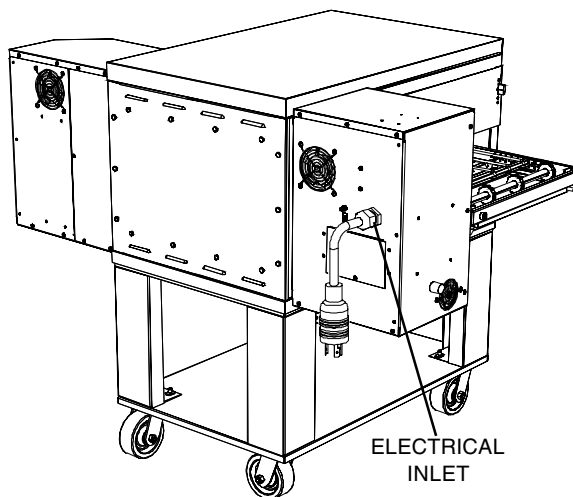


Figure 2-11. Junction Connection Box

| | | | | | |
|---|--------|---------|--------|--------------------------------|----------------------------|
| MIDDLEBY MARSHALL 1400 TOASTMASTER DRIVE ELGIN ILLINOIS 60120 USA | | | | | |
| MOD., TYP | | SR.-NR: | | ANNO | |
| | | ID.-NR: | | | |
| IT.PT.ES.SE,GB CHJE.AT.DK,FLCR | NL | LU, DE | BE,FR | SE,CH.AT.DK.NO FLDENL,CR,FR | BE,JE,IT,FR PT,ES,CH,GB |
| CAT | I2H | I2L | I2E | I2E+ | I3B/P |
| P | G20 20 | G25 25 | G20 20 | G20 20/25 | G30 28-30/50 |
| | | | | | G30 28-30/37/50 |
| On = kW _____ U = V _____ A = A _____ IP20 TYPE A | | | | | |
| 0359 | | | | | |
| THIS APPLIANCE IS FOR PROFESSIONAL USE AND SHALL BE USED BY QUALIFIED PEOPLE | | | | | |
| P/N 45838 REV G | | | | | |

International CE Plate

| | | | |
|---|-----------|------------------|------------|
| MODEL NO. _____ | | SERIAL NO. _____ | |
| Numero de modele | | Numero de serie | |
| ID NO. _____ | | | |
| VAC _____ | AMP _____ | L1 _____ | L2 _____ |
| Tension | Intensité | | |
| 100 TYP. | 160 FLCS. | | |
| KW _____ | HZ _____ | PH _____ | WIRE _____ |
| | | Phase | Cablage |
| MOTOR VOLTS _____ | PH _____ | AMP _____ | |
| Moteur Volts | Phase | Intensité | |
| DO NOT INSTALL CLOSER THAN _____ INCHES TO A NON-COMBUSTIBLE BACK WALL, AND _____ INCHES TO NON-COMBUSTIBLE SIDE WALLS ONLY. FOR INSTALLATION ON COMBUSTIBLE FLOORS ADJACENT TO COMBUSTIBLE WALLS WITH FOLLOWING MINIMUM CLEARANCES: _____ INCHES RIGHT SIDE WALL. _____ INCHES TO LEFT WALL. _____ INCHES TO BACK WALL. | | | |
| N'INSTALLEZ PAS À MOINS DE _____ PO D'UN PANNEAU ARRIERE INCOMBUSTIBLE ET À _____ PO DE PANNEAUX LATÉRAUX INCOMBUSTIBLES UNIQUEMENT. DESTINÉ À UN USAGE AUTRE QUE DOMESTIQUE. INTENDED FOR OTHER THAN HOUSEHOLD USE. | | | |
| 1400 TOASTMASTER DRIVE ELGIN, ILLINOIS 60120, U.S.A. | | | |
| 58305 REV. B | | | |

Domestic Plate

Figure 2-10. Typical Electric Oven Data Plate

SECTION 3 OPERATION

I. CONTROL FUNCTIONS

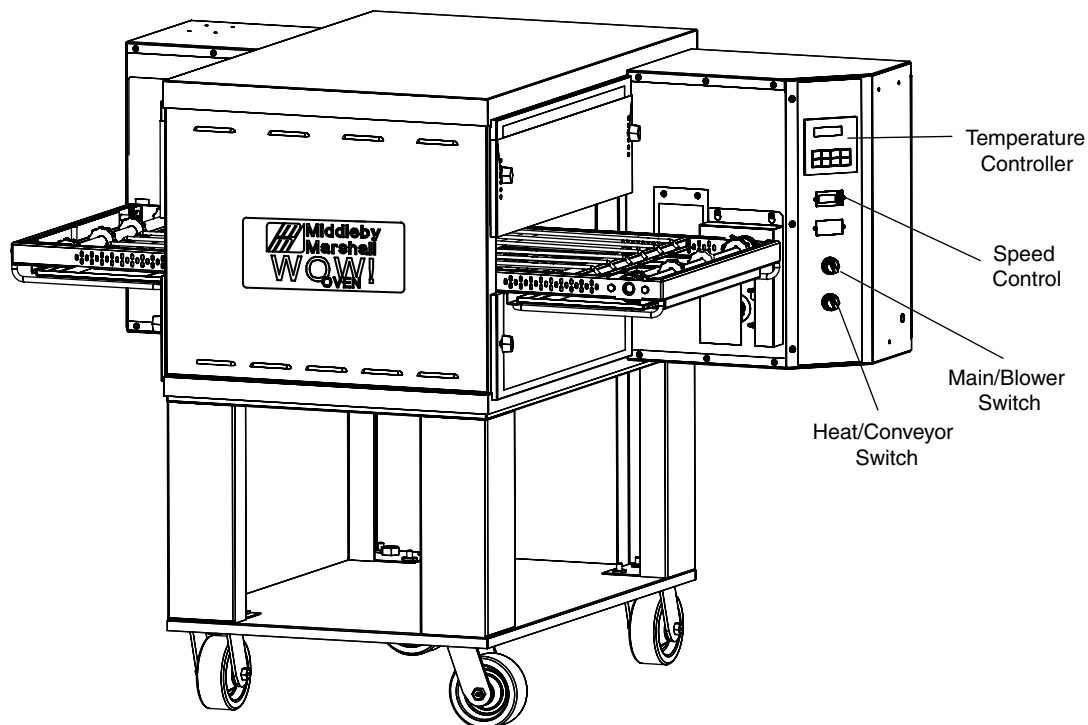


Figure 3-1. PS724-Series Oven Control Functions

WARNING

A possibility of injury from rotating parts and electric shock exists in this oven. Never disassemble or clean the oven with the BLOWER switch or any other oven control turned "ON" or "I". Turn "OFF" or "O" and lockout or tagout all electric power to the oven before attempting to clean or service this oven.

SECTION 3 OPERATION

II. COMPONENT INFORMATION AND LOCATION (Figures 3-1 and 3-2)

A. Door Safety Switch

The Door Safety Switch is located at the lower right side of control panel opening. Opening the control panel door permits this switch to open, disconnecting power to all electrical controls, except for the blower motor inverters, located in the left side control cabinet.

CAUTION

Do NOT touch the wires going to this safety switch. Current is always present.

B. Blower Switch

The blower switch has two positions. The switch must be "ON" or "I" for the main blowers to come on and permit the oven to run. The fan circulates the air throughout the oven and must stay on during baking and during the cool down cycle above 200°F (93°C) to prevent blower

bearing damage. To protect the blower motor and bearings a thermostatic override is built into the oven. If the temperature inside the oven is over 180°F (82°C) the main blower will continue to run after the blower switch is turned to the "OFF" or "O" position.

C. Heat / Conveyor Switch

The "Heat/Conveyor Switch" allows the burner to activate. Activation is determined by the settings on the Digital Temperature Controller.

D. Temperature Controller

The temperature controller is a solid-state, PID type to maintain the operator-set temperature. The temperature controller continuously monitors the oven temperature and turns on the modulating solid state relay controller. The heat is proportioned as required to maintain a constant oven temperature.

The temperature controller contains a low-limit switch which allows the oven to cool down to 200°F (93°C) before shutting off the blower. A high-limit indication (ALM 1) will appear on the display if the oven reaches 650°F (343°C).

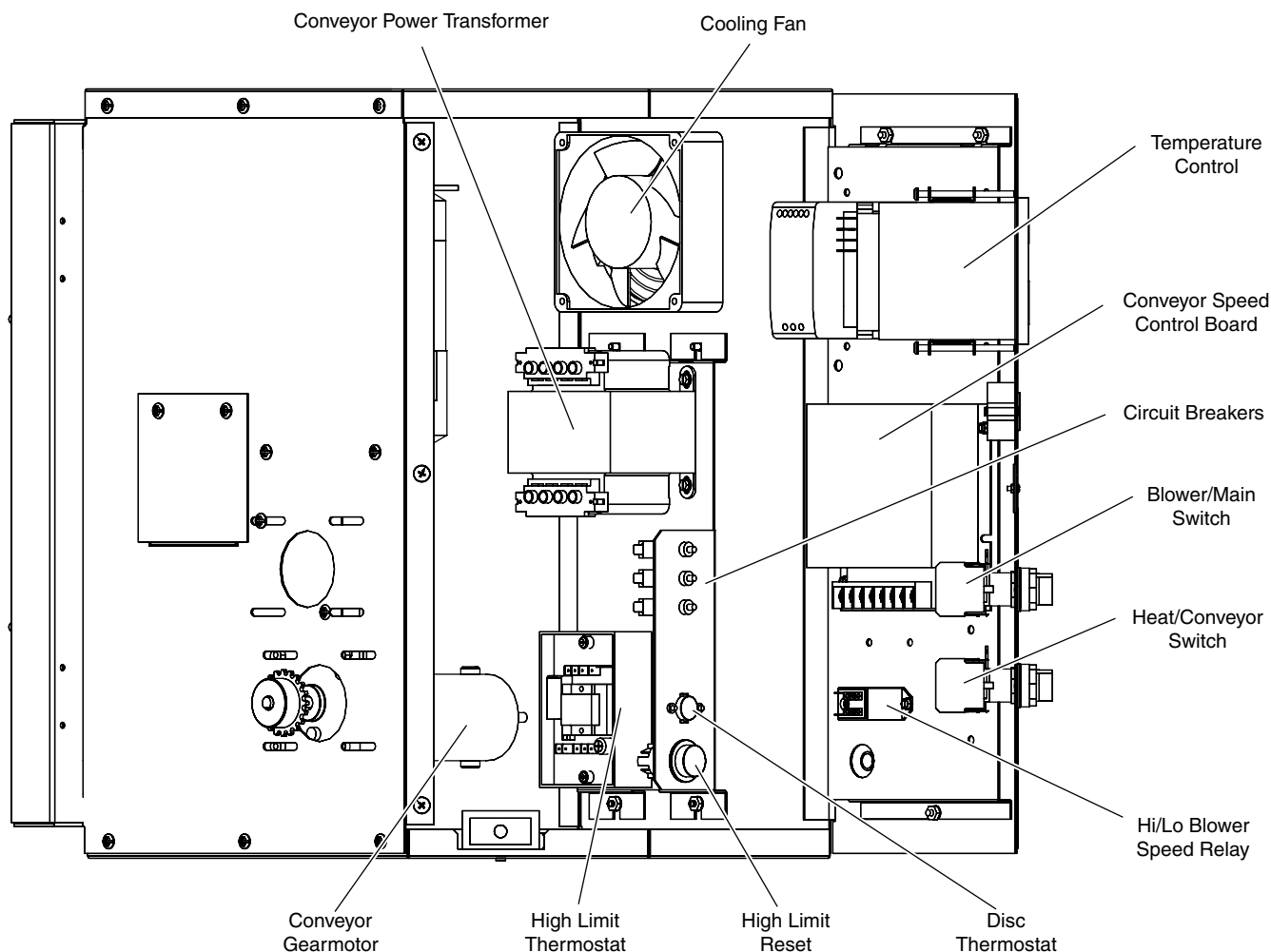


Figure 3-2. Interior View of Control Console

E. Conveyor

The on-off switch for the conveyor motor is on the control panel. Also on the control panel is the digital conveyor speed control. The digital control can be adjusted from 30 seconds to 12 minutes bake time (conveyor speed). Refer to Figure 3-3.

Conveyor speed is measured by the amount of time it takes for an item to go through the bake chamber of the oven.

MEASURING CONVEYOR SPEED.

See Figures 3-4 and 3-5.

To check conveyor speed, place a product item at the entrance end of baking chamber as shown. Time how long it takes for the leading edge of the item to go from the entrance end of the baking chamber to the exit end. This should be the conveyor speed shown on the conveyor speed digital control.

NOTE: In Figures 3-4 and 3-5, the oven shown is with the conveyor running right to left.

WARNING

Possibility of injury from rotating parts and electrical shock exist in this oven.

Never disassemble or clean the oven with the blower switch or any other part of the oven turned "ON" or "I". Turn "OFF" or "O" and lockout or tagout all electrical power to the oven before attempting to clean or service this oven.

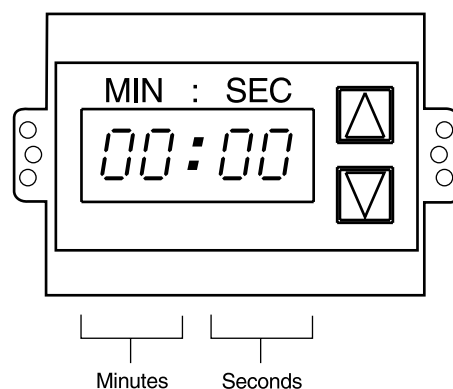


Figure 3-3. Conveyor Speed Digital Control

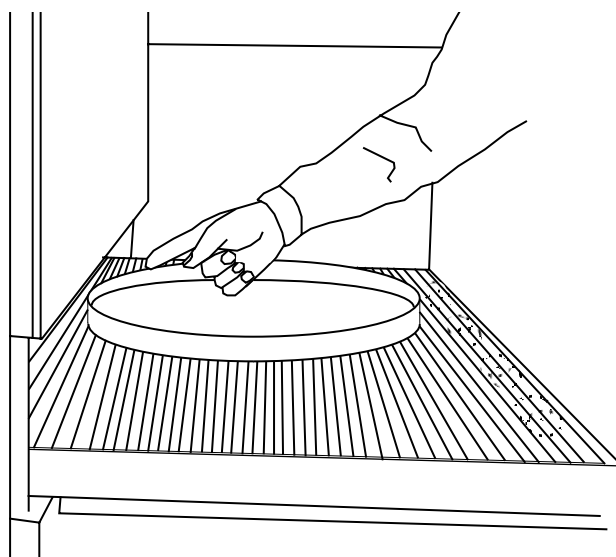


Figure 3-4. Product at entrance end of baking chamber – BEGINNING OF TIMING

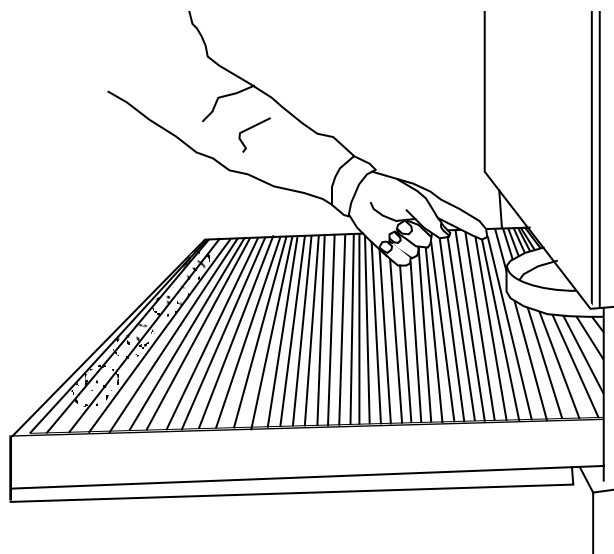


Figure 3-5. Product at exit end of baking chamber – END OF TIMING

SECTION 3 OPERATION

WARNING

**OVEN MUST BE KEPT CLEAR OF
COMBUSTIBLES AT ALL TIMES.**

III. STEP-BY-STEP OPERATION

A. Startup Procedures

Daily Startup

1. Turn the BLOWER switch (Figure 3-6) to the "ON" or "I" position. This starts the main blower fan and the cooling fans. The blower circulates air through the air fingers and must stay on during the cooking or baking process.

2. Check to see if the cooling fans (see Figure 1-8) are operating when the blower switch (see Figure 3-6) is turned "ON" or "I". The cooling fans cool the control components and blower motor. The cooling fans, located at the rear of the oven blows air into and through the cabinet. Air is exhausted through the front of the cabinet and also out the front of the oven. Refer to Daily Maintenance Section for fan intake checking procedure.

IMPORTANT NOTE

The cooling fan operates when the BLOWER switch is turned "ON" or "I". It must operate to keep the control console below 140°F (60°C).

3. Turn the HEAT/CONVEYOR switch (Figure 3-6) to the "ON" or "I" position. This starts the conveyor belt moving through the oven. Set the conveyor speed for the desired baking time. Refer to the following Procedures E, F and G.

4. Set the temperature controller to the desired baking temperature.

NOTE: For complete temperature controller operation instructions refer to Step C.

5. Turn the HEAT/CONVEYOR switch (Figure 3-6) to the "ON" or "I" position. Wait for the "Heat ON" light to turn on.

6. Oven will reach a baking temperature of 500°F (232°C) in about 10 minutes. Allow the oven to cycle for 20 minutes after it has reached desired bake temperature. The oven is now ready for baking.

7. Oven will continue to run at a reduced blower speed in order to save energy, but will automatically change to the higher, baking blower speed when product is placed on the belt. The "energy eye" (photo eye) and an internal timer control these changes. The changes in blower speed are noticable and normal as the oven changes from baking to energy saving mode.

NOTE: The time setting for the baking mode should be set at installation, based upon the longest baked product time. If the blowers return to the lower, energy saving speed before the product fully exits the oven, contact your local Middleby Marshall Service Agent for timing adjustment.

Power Failure

In case of power failure, turn off all switches and remove product. After power has been reestablished follow normal startup procedure.

B. Shutdown Procedure

1. Turn the BLOWER and HEAT/CONVEYOR switches to "OFF" or "O".

NOTE: The blowers will remain on until the oven temperature cools down to 200°F (93°C) at which time they will stop automatically.

2. Make certain that there are no products left on the conveyor inside the oven. Turn the HEAT/CONVEYOR switch to "OFF" or "O".

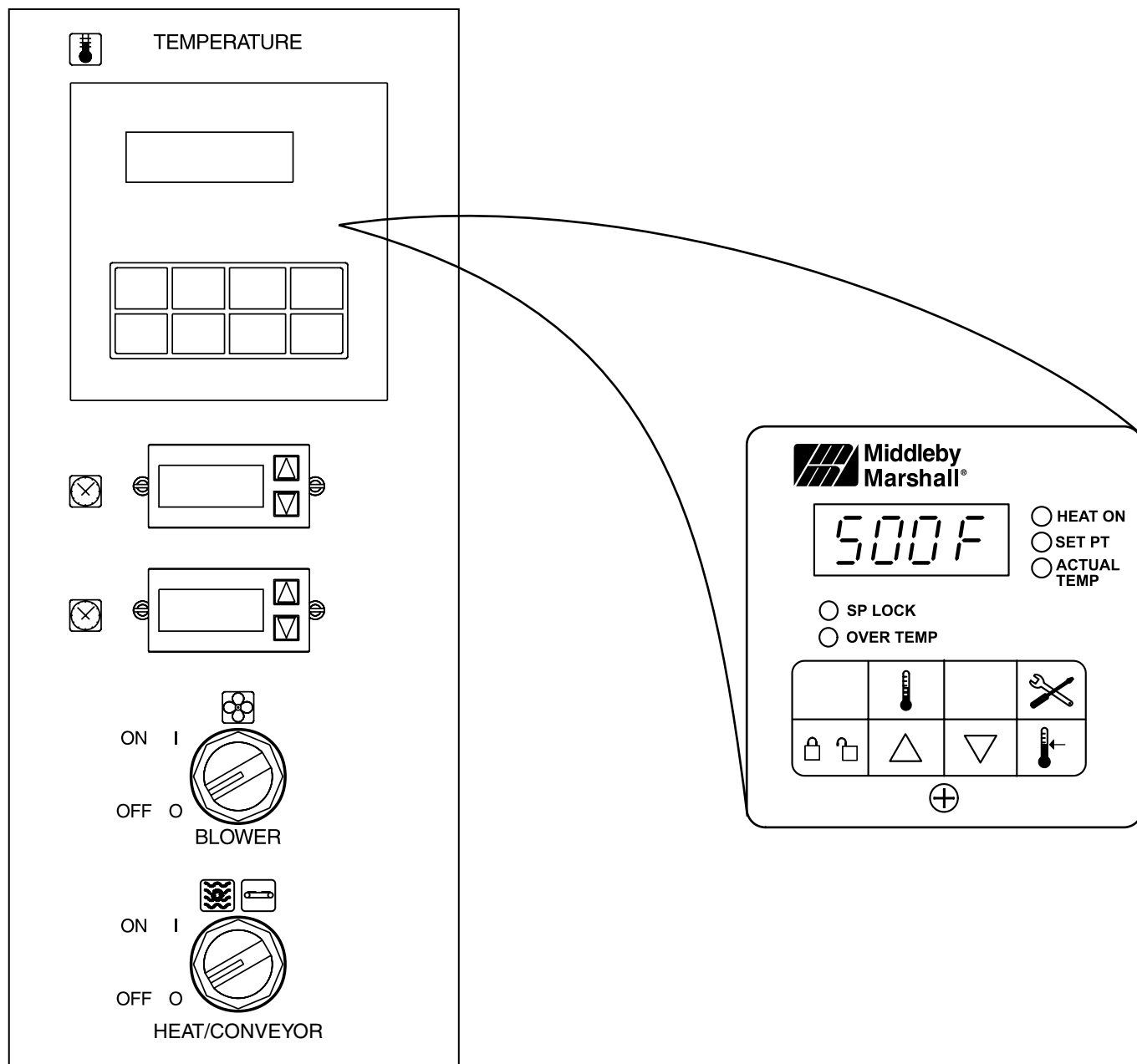


Figure 3-6. Control Panel

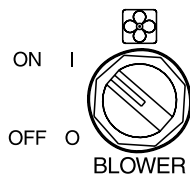
SECTION 3 OPERATION

IV. NORMAL OPERATION - STEP-BY-STEP

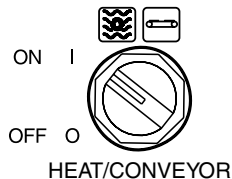
A. Daily Startup Procedure

1. Check that the circuit breaker/fused disconnect is in the ON position.

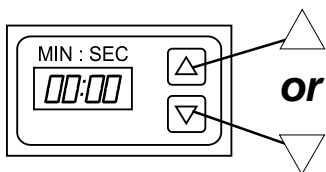
2. Turn the "BLOWER" (⊗) switch to the "ON" ("I") position.



3. Turn the "HEAT/CONVEYOR" (⊗) switch to the "ON" ("I") position.

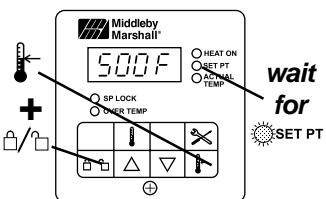


4. If necessary, adjust the conveyor speed setting by pressing the Δ or ∇ pushbuttons on the conveyor speed controller to change the displayed bake time.

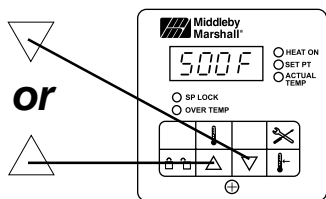


5. Adjust the temperature controller to a desired set temperature, if necessary.

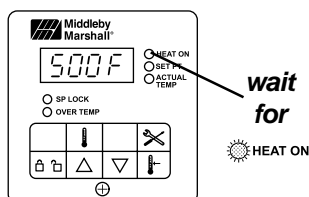
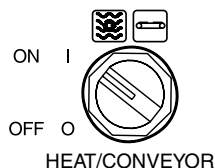
- Press the Set Point and Unlock keys at the same time. Wait for the "SET PT" light to turn on.



- Press the Up Arrow and Down Arrow Keys as necessary to adjust the set-point.

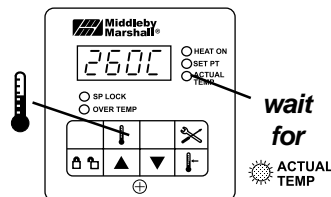


6. Turn the "HEAT/CONVEYOR" (⊗) switch to the "ON" ("I") position, and wait for the "HEAT ON" light to turn on.



7. Wait for the oven to heat to the setpoint temperature. Higher setpoint temperatures will require a longer wait. The oven can reach a temperature of 500°F (232°C) in approximately 10-12 minutes.

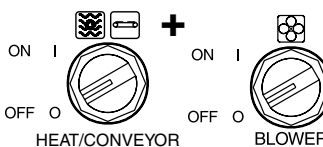
8. (Optional) Press the Temperature (⊗) key to show the Actual Temperature in the display, and wait for the "ACTUAL TEMP" light to turn on. This allows you to monitor the oven temperature as it rises to the setpoint.



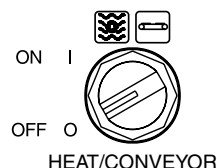
9. Allow the oven to preheat for 10 minutes after it has reached the set point temperature.

B. DAILY SHUTDOWN PROCEDURE

1. Turn the "HEAT/CONVEYOR" (⊗) and "BLOWER" (⊗) switches to the "OFF" ("O") position. Note that the blowers will remain in operation until the oven has cooled to below 200°F (93°C).



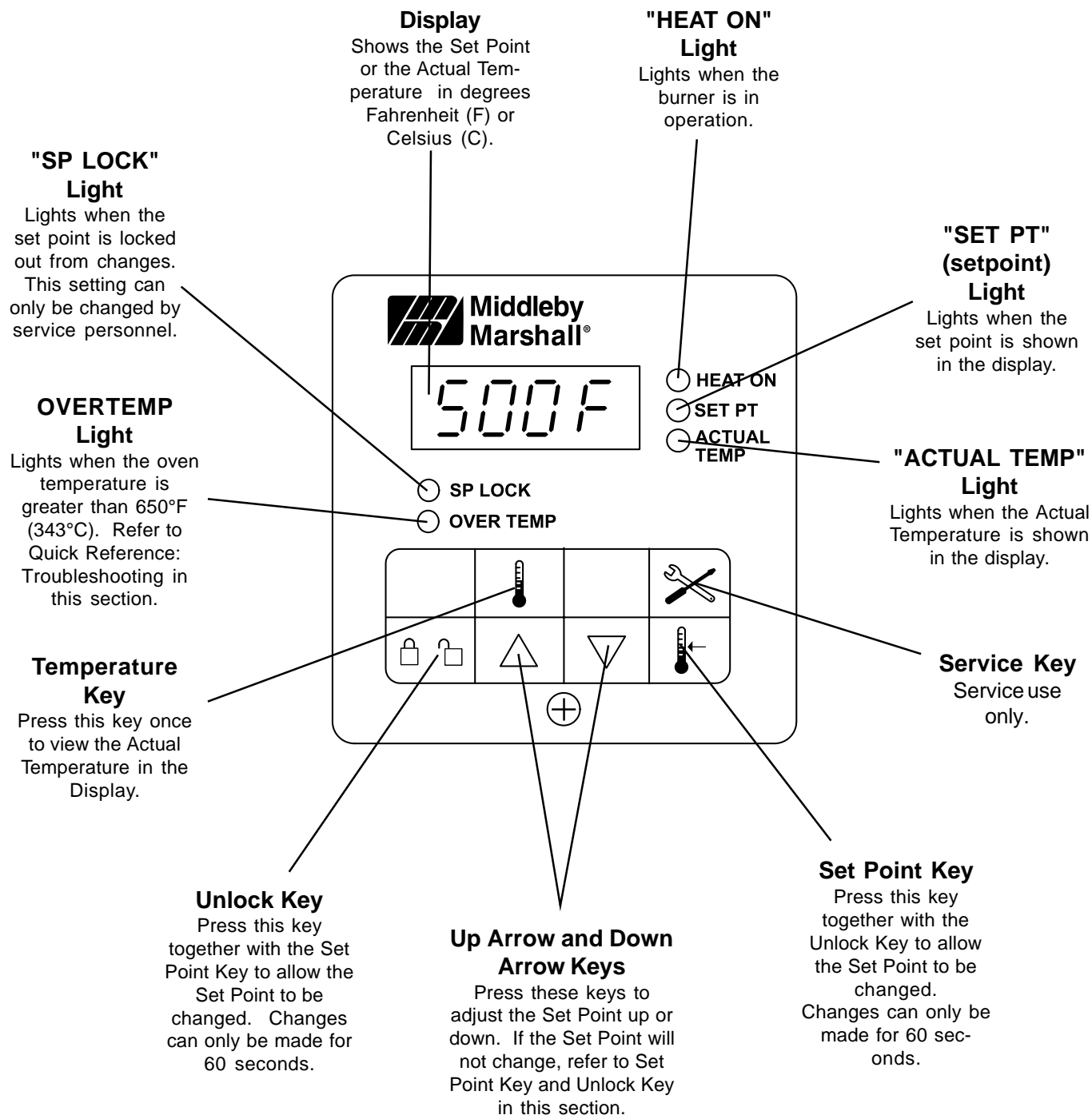
2. Make certain that there are no products left on the conveyor inside the oven. Turn the "HEAT/CONVEYOR" (⊗) switch to the "OFF" ("O") position.



3. After the oven has cooled and the blowers have turned to the "OFF" or "O" position, switch the circuit breaker/fuse disconnect to the "OFF" or "O" position.










CAUTION

In case of power failure, turn all switches to the "OFF" ("O") position and remove the product. After the power has been restored, perform the normal startup procedure. IF THE OVEN WAS SWITCHED OFF FOR LESS THAN 5 MINUTES, WAIT FOR AT LEAST FIVE MINUTES BEFORE RESTARTING THE OVEN.



SECTION 3 OPERATION

V. QUICK REFERENCE: TROUBLESHOOTING

| SYMPTOM | PROBLEM | SOLUTION |
|---|--|--|
|  OVERTEMP <i>light is lit, food product is undercooked</i> | The oven temperature exceeded 650°F (343°C), and the burner was automatically shut down. | <ul style="list-style-type: none"> Follow the procedures under Daily Shutdown Procedures in this section to shut down the oven. Contact your Middleby Marshall Authorized Service Agent to determine and correct the cause of the condition to prevent damage to the oven. |
| <i>Oven will not turn on at all</i> | Electrical power may not be reaching the oven, or the controls may be set incorrectly. | <ul style="list-style-type: none"> Check that the circuit breaker/fused disconnect is turned on. Check that the "BLOWER"  Switch is in the "ON" ("I") position. |
|  <i>appears in display, oven is not heating</i> | The oven did not reach 200°F (93°C) within 10-12 minutes of startup, and the oven has stopped heating. | <ul style="list-style-type: none"> Turn the "HEAT/CONVEYOR"  and "BLOWER" , switches to the "OFF" ("O") position. Wait for AT LEAST FIVE MINUTES before restarting the oven. Repeat the Daily Startup procedure. |
| <i>Oven will not heat</i> | Controls may be set incorrectly. | <ul style="list-style-type: none"> Check that the Set Point is correctly set. Check that both the "BLOWER"  and "HEAT/CONVEYOR"  Switches are in the "ON" ("I") position. If the oven still will not heat, turn the "HEAT/CONVEYOR"  and "BLOWER"  switches to the "OFF" ("O") position. Wait for AT LEAST FIVE MINUTES before restarting the oven. Repeat the Daily Startup procedure. Check that the Set Point is above 200°F (93°C). |
| <i>Oven is operating, but little or no air is blowing from air fingers</i> | Air fingers may have been reassembled incorrectly after cleaning. | <ul style="list-style-type: none"> Turn the oven to the "OFF" or "O" position, and allow it to cool. Disconnect electrical power to the oven. Refer to Section 4, Maintenance, for instructions on reassembling the air fingers. |
| <i>Conveyor moves with a jerky motion, or will not move at all</i> | Conveyor may be jammed on an object in the oven, or conveyor belt or drive chain tension may be incorrect. | <ul style="list-style-type: none"> Turn the oven to the "OFF" or "O" position, and allow it to cool. Disconnect electrical power to the oven. Check if the conveyor is blocked by an object inside the oven. Refer to Section 4, Maintenance, for instructions on checking the conveyor and drive chain tension. |
| <i>Food products are overcooked or undercooked.</i> | Controls may be set incorrectly. | <ul style="list-style-type: none"> Check that the set temperature and bake time settings are correct. |

IF THESE STEPS FAIL TO RESOLVE THE PROBLEM, CONTACT YOUR LOCAL MIDDLEBY MARSHALL AUTHORIZED SERVICE AGENT. A SERVICE AGENCY DIRECTORY IS SUPPLIED WITH YOUR OVEN.

SECTION 4 MAINTENANCE

WARNING

Before ANY cleaning or servicing of the oven, perform the following procedure:

1. Switch off the oven and allow it to cool. Do NOT service the oven while it is warm.
2. Turn off the electric supply circuit breaker(s) and disconnect the electric supply to the oven.

When all cleaning and servicing is complete:

1. If the oven was moved for servicing, return the oven to its original location.
2. Reconnect the electrical supply.
3. Turn on the electric supply circuit breaker(s).
4. Perform the normal startup procedure.

WARNING

Possibility of injury from rotating parts and electrical shock exist in this oven. Turn off and lockout or tagout electrical supply to oven(s) before attempting to disassemble, clean or service oven(s). Never disassemble or clean the oven with the blower switch or any other part of the oven turned on.

WARNING

Before performing any maintenance work or cleaning, turn main power switch off.

CAUTION

When cleaning do not use any abrasive cleaning materials or water spray, wipe clean only. Never use a water hose or pressurized steam cleaning equipment when cleaning this oven.

NOTICE

If the oven is to be removed from its installed location for servicing, perform the following procedure:

1. Switch off the oven and allow it to cool. Do NOT service the oven while it is warm.
2. Turn off main circuit breakers and disconnect connector from oven.
3. Move oven to desired location for servicing.
4. When servicing is complete, move oven to original location.
5. Adjust legs to level oven.
6. Connect electrical connectors to oven.
7. Turn on main circuit breakers.
8. Follow normal startup instructions.

SECTION 4 MAINTENANCE

I. MAINTENANCE - DAILY

A. Exterior

Everyday you should clean the outside of the oven with a soft cloth and mild detergent.

WARNING

Never use a water hose or pressurized steam cleaning equipment when cleaning the oven.

B. Cooling Fan

1. TWO COOLING FAN GRILLES AT THE REAR OF THE OVEN MUST BE CLEANED DAILY - Clean grilles with a stiff nylon type brush.

2. Check the air intakes of the cooling fans daily. The best time to check is right after starting the oven.

IMPORTANT NOTE

The cooling fans operate when the blower switch is turned to "ON" ("I"). It must operate to keep the electrical control cabinet below 140°F (60°C).

WARNING

IF THE FAN BLADES ARE NOT ROTATING, BROKEN, OR THE FAN ASSEMBLY IS MISSING FROM THE MAIN BLOWER MOTOR SHAFT, DO NOT OPERATE THE OVEN. REPLACE THE COOLING FAN BLADE BEFORE OPERATING OVEN. Serious damage could be done to the burner blower motor and/or solid-state electrical components if the oven is operated while the cooling fans are not running or if the vent grilles are plugged.

3. Using a stiff nylon brush clean the control compartment vent grilles.

C. Conveyor Belt (Figure 4-2)

Everyday, just after starting the oven, stand at the unloading end of the conveyor, and with a brush, remove food particles (crumbs, etc.) clinging to the conveyor belt, brushing them into the crumb pan.

D. Crumb Pans (Figure 4-2)

WARNING

Crumb pan is extremely hot while oven is operating. Allow oven to cool before removing crumb pan.

When the oven is cool remove and clean the crumb pan at each end of the oven. Each crumb pan can be removed by sliding it out, as shown in Figure 4-2. Reinstall the crumb pans after cleaning.

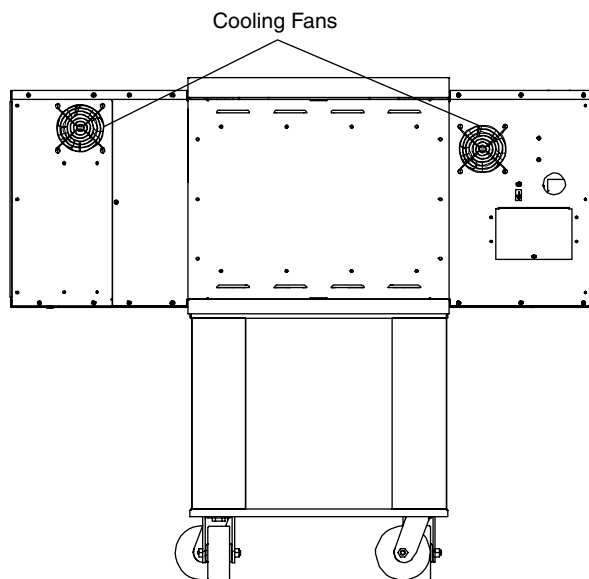


Figure 4-1. Oven Cooling Fans

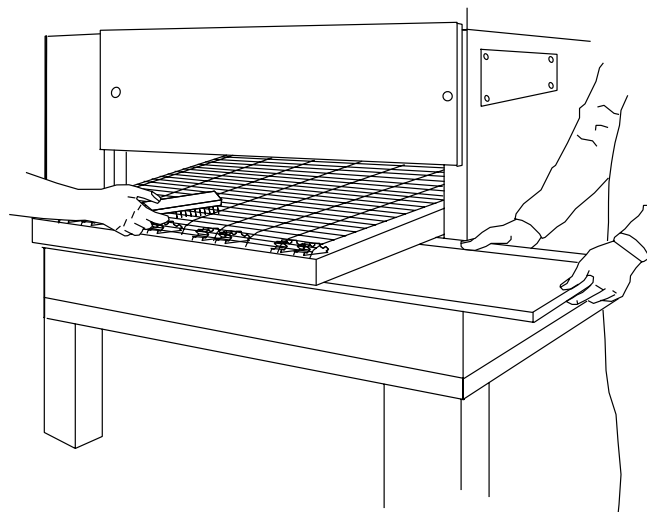


Figure 4-2. Conveyor Belt and Crumb Pan Cleaning

II. MAINTENANCE - MONTHLY

NOTE: The oven interior may require cleaning more than once a month depending on the volume of baking. To clean the interior, you have to disassemble some parts of the oven.

When cleaning your Series PS724 Oven note the following:

PRECAUTIONS-

1. Do not use excessive water or saturation of oven insulation will occur.
2. Do not use a caustic oven cleaner or the aluminized finger manifold surfaces will be severely damaged.

When cleaning your oven, first remove all heavy debris with a vacuum cleaner. Use a damp cloth for light cleaning. For heavier cleaning of baked on grease and carbon deposits use a non-caustic cleaner that will not react with the aluminized finger manifold surfaces.

You can order non-caustic cleaner from your local authorized Middleby Marshall Parts Distributor in the quantities listed below:

| Part # | Quantity |
|------------|---------------------|
| 27170-0244 | Case of Quarts (6) |
| 27170-0246 | Case of Gallons (4) |

A. Removing Conveyor From Oven For Cleaning

1. Loosen two screws and remove chain/sprocket cover (right side).
2. Push down and hold on the end of the conveyor (right side) to remove tension from the chain allowing the chain to be slipped off the conveyor shaft sprocket.
3. Now the conveyor assembly can be slid out the drive. (right) side of the oven.

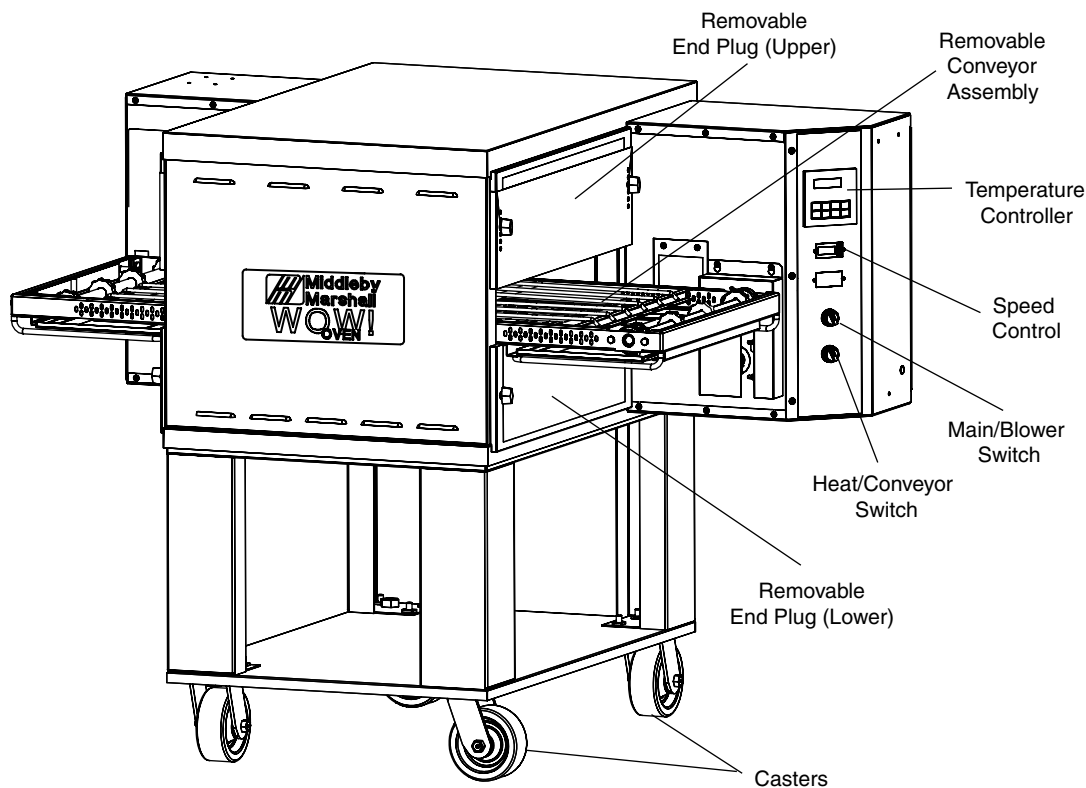


Figure 4-3.

SECTION 4 MAINTENANCE

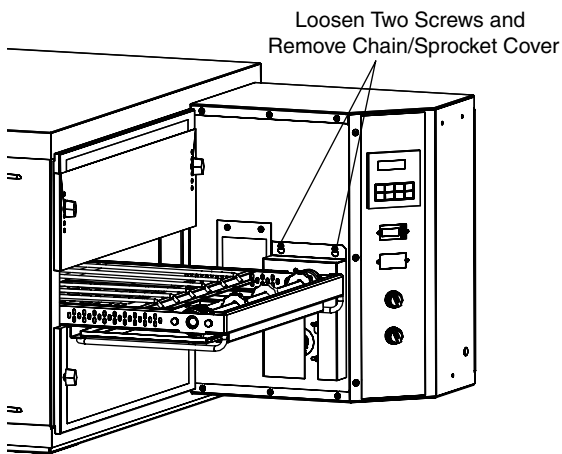


Figure 4-4.

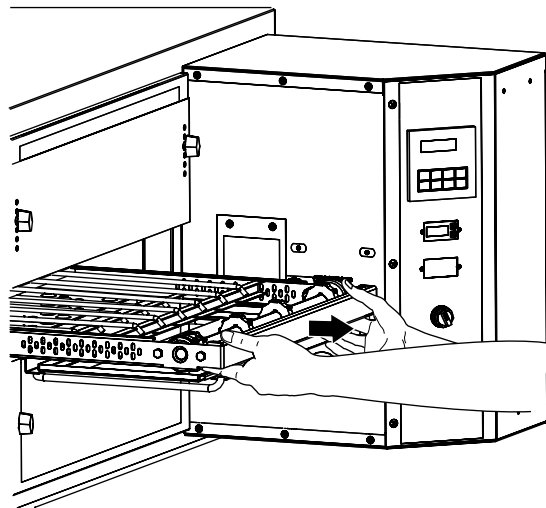


Figure 4-6.

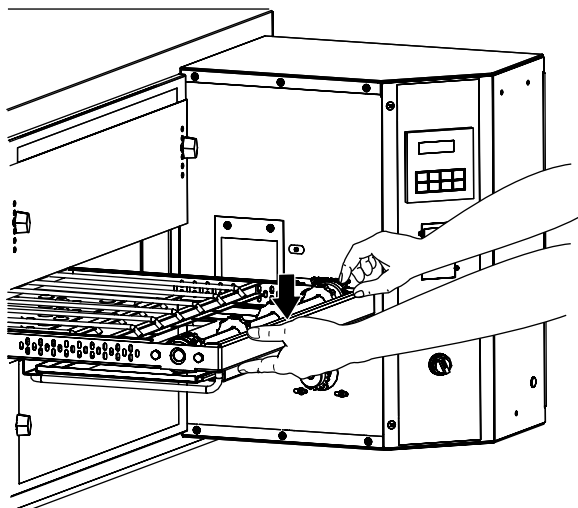


Figure 4-5.

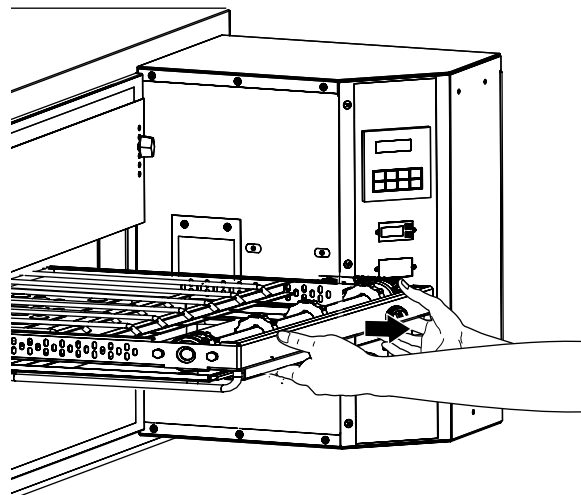


Figure 4-7.

CAUTION

Be careful not to bump the drive sprocket while handling the conveyor, to avoid damaging the drive shaft.

B. Air Fingers Disassembly For Cleaning

1. As the air fingers are removed use a felt pen to mark all parts of the fingers. This includes the finger manifold, inner plate and the outer plate (refer to Figure 1-9). Fingers are marked in the order shown; as viewed from the front of the oven. (The marks for an upper oven should be preceded with a "U", example UB1, UT2, etc.)

T1 **T2**

B1 **B2**

Standard Fingers

2. Remove air fingers.

NOTE: Some oven users require a custom finger arrangement where the quantity of air fingers may vary.

You can remove top and bottom fingers from each or either end. It is highly recommended that each finger be marked before removing so it is placed in exactly the same position when reassembled (refer to step 1).

Remove the air fingers, pull the finger at the back side - pull straight out.

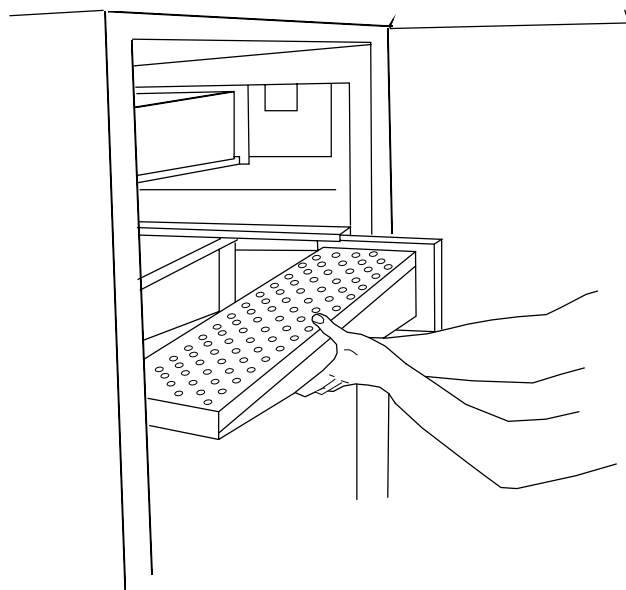


Figure 4-8.

3. With air fingers out, place them in an upright position to remove the outer plate.

4. Gently step on the lip of the finger and pull the outer plate off.

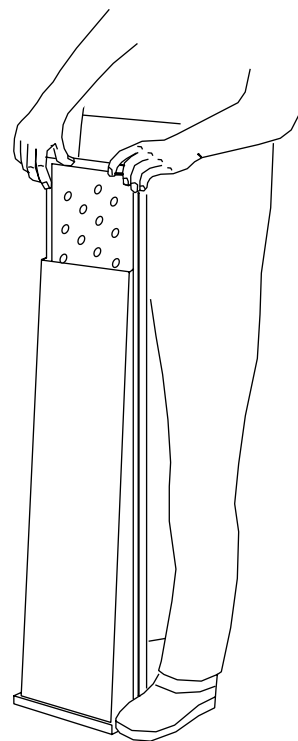


Figure 4-9.

6. To remove the inner plate, pull the plate out and then up.

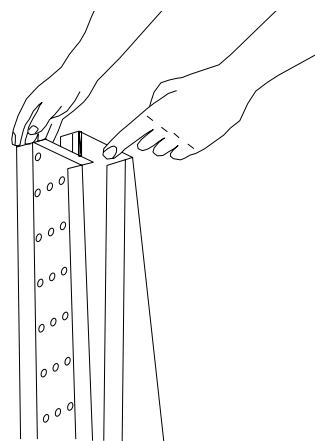


Figure 4-10.

6. The outer finger plate is stainless and may be cleaned by either soaking in a hot, strong detergent solution or using a caustic cleaner. The conveyor belt can also be cleaned in the same way.

SECTION 4 MAINTENANCE

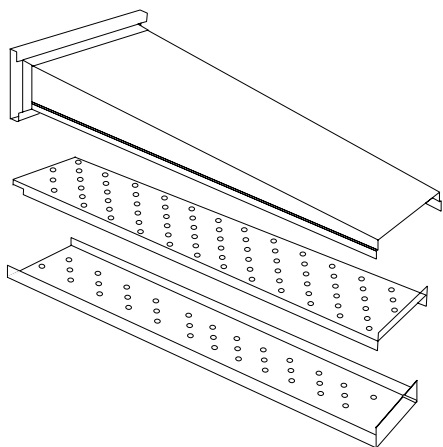


Figure 4-11. Standard Lower Finger

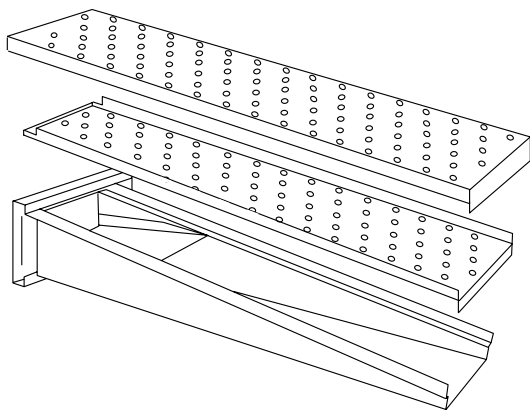


Figure 4-12. Standard Upper Finger

C. Reassembly of Air Fingers

1. Air fingers are made up of one inner plate, one outer plate and the finger housing manifold. Be sure to match up the markings (T1, T2, T3, etc.) on all the parts of the air fingers as you are reassembling.

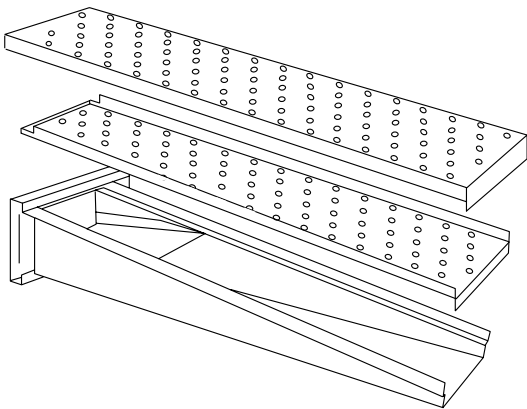


Figure 4-13.

2. Reassemble the inner plate. Keep your fingers clear so you won't pinch them. The inner plate of a finger will only go in one way because of its design.

3. Replace the outer plate by placing your hands flat on the top of the plate and pushing down. Keep your fingers clear so you won't pinch them.

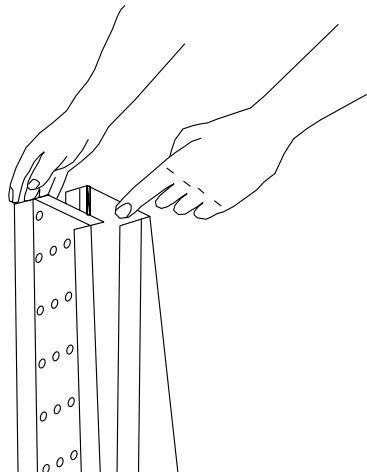


Figure 4-14.

4. Replace the air fingers by pushing in at the back side. Remember to replace them according to the numbers marked on them when they were removed. They must go back in the same way they came out.

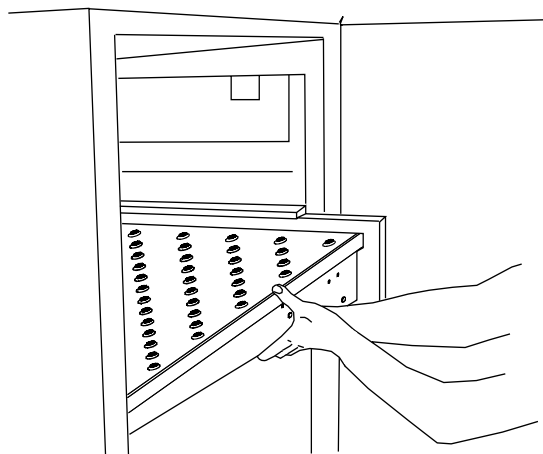


Figure 4-15.

5. Install fingers with center spacer between the two finger back plates to insure proper spacing

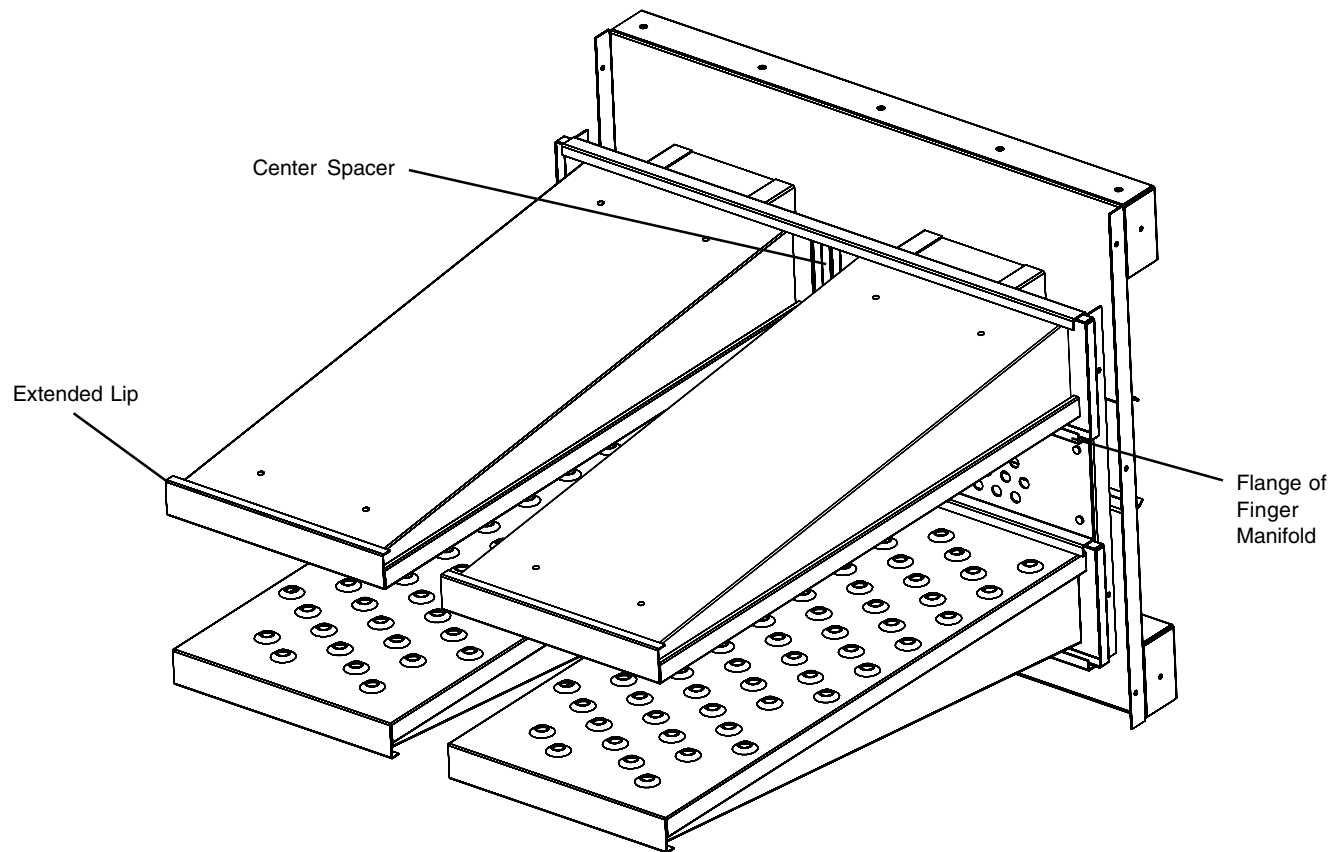


Figure 4-16.

SECTION 4 MAINTENANCE

D. Reinstall End Plugs

1. Reinstall lower end plug (has flange that extends into oven). Place and secure plastic wing nuts on the end plug.
2. Reinstall conveyor.
3. Reinstall upper end plug (no inner flange). Place and secure plastic wing nuts on the end plug.

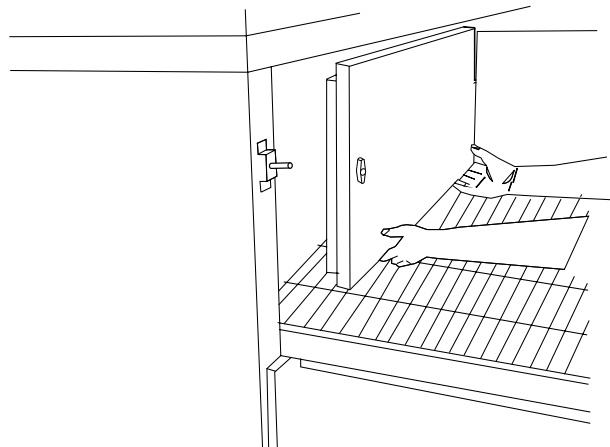


Figure 4-17.

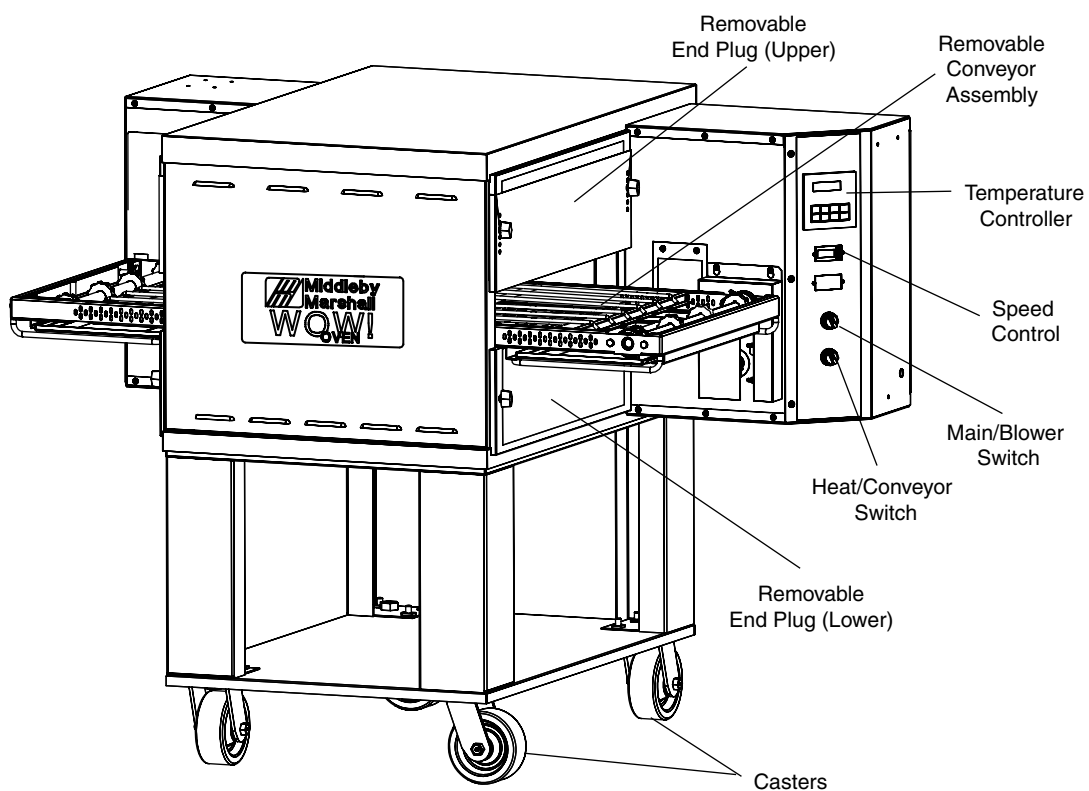


Figure 4-18.

E. Conveyor Reassembly Into Oven

1. Lift conveyor and position it in oven as shown.

NOTE: Conveyor must be inserted into the drive end of oven.

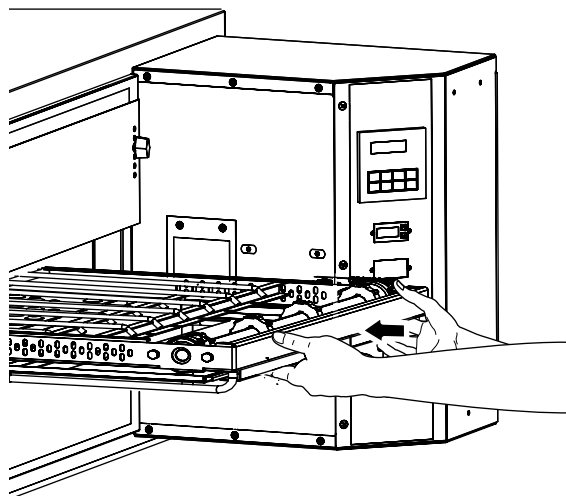


Figure 4-19.

2. Reinstall the conveyor extension.

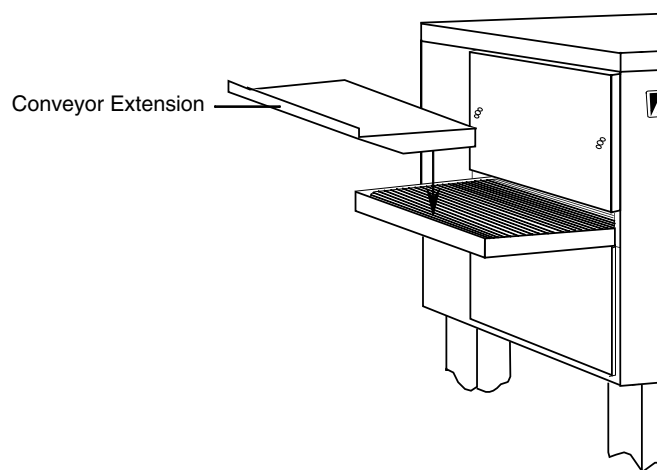


Figure 4-20.

F. Checking Conveyor Belt Tension

WARNING

Oven conveyor belt must be cool when adjusting belt. Do not adjust belt if HOT.

1. With the conveyor assembly in the oven, stand at one end of conveyor and check tension by lifting the conveyor belt at the center of the oven chamber opening. The belt should not lift higher than 1" to 2" (75mm to 102mm).
2. If conveyor belt is still not under proper tension, an entire link must be removed. Use the following procedure "H. Conveyor Belt Link Removal" to remove a link. If conveyor belt is under proper tension proceed directly to "J. Attaching Drive Chain".

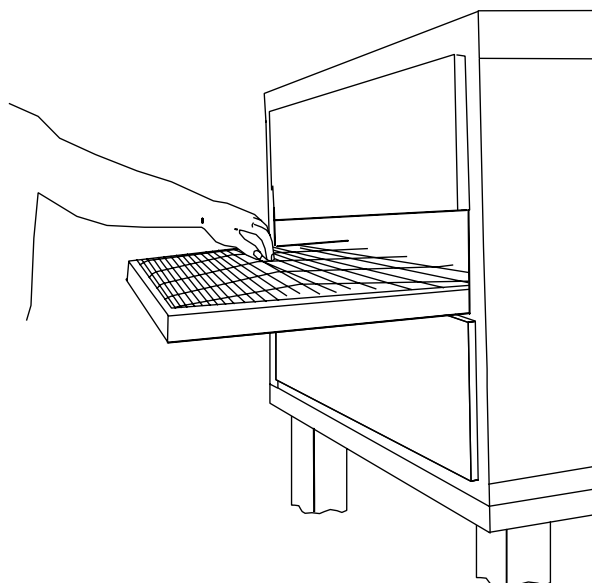


Figure 4-21.

SECTION 4 MAINTENANCE

G. Conveyor Belt Link Removal

1. Using long nose pliers, an entire link can be removed with the conveyor assembly either in or out of the oven. Position master links at end of conveyor as shown in Figure 4-22.

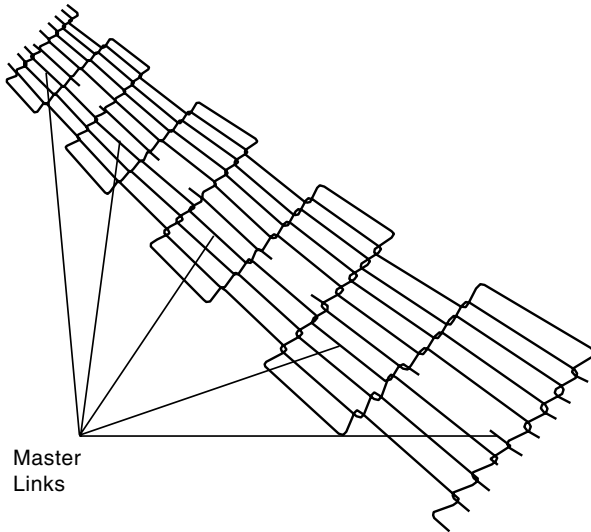


Figure 4-22.

2. Using long nose pliers, unhook master links at left end of conveyor as shown in Figure 4-23.

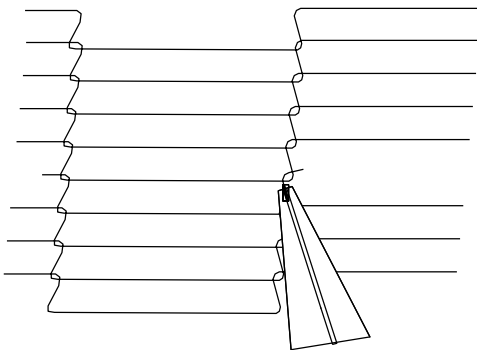


Figure 4-23.

3. Remove the outside master links on the right and left sides of the conveyor belt as shown in Figure 4-24.

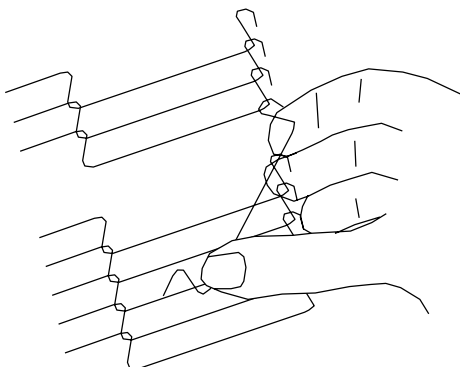


Figure 4-24.

4. Unhook the link to be removed.

5. Pull up on the belt link section and remove. Do not discard the link removed as it may be used for making spare master links.

NOTE: If a section of the conveyor belt is being replaced it should be done now. Remove the links that need replacing and use the section of conveyor belt furnished in your installation kit to replace them.

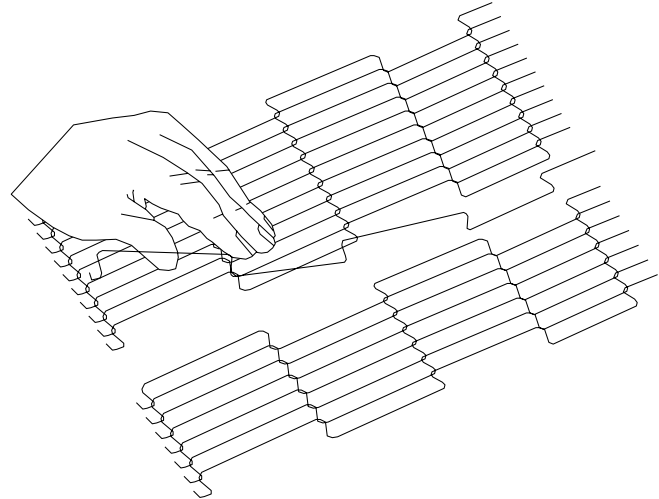


Figure 4-25.

NOTE: Before connecting the inside master links, notice that these links have a correct position (Figure 4-26). The link at the right is in the correct (horns up) position for inserting into the conveyor belt. The horns facing down are in the incorrect position.

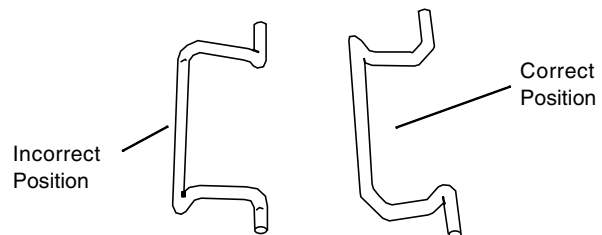


Figure 4-26.

6. Reconnect the inside master links (Figure 4-27.)

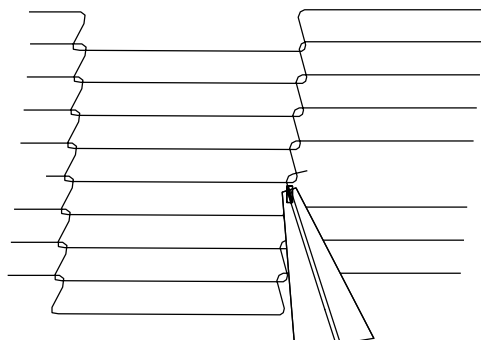


Figure 4-27.

NOTE: The outside master links have right and left sides to them. The right edge master link has an open hook facing you as shown in Figure 4-28. This will match up with the outer edges of the conveyor belt. Remember this hook travels backwards on the conveyor.

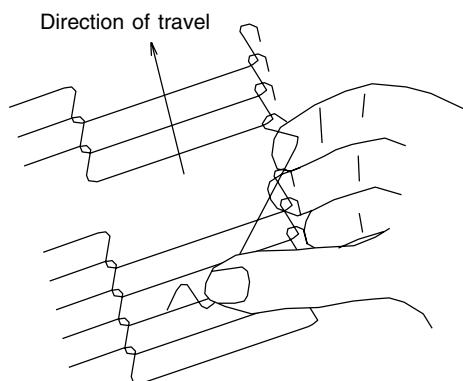


Figure 4-28.

7. Reconnect the outside master links.
8. Replace all parts removed from the oven.

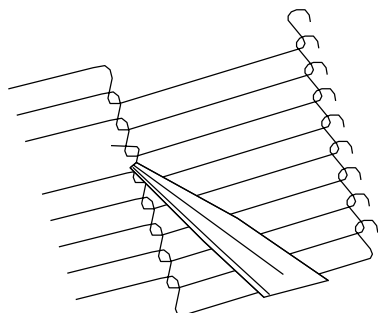


Figure 4-29.

H. Attaching Drive Chain

1. If drive sprocket assembly was removed reassemble it into the conveyor drive shaft. Be sure flat on end of drive shaft aligns with set screw in conveyor shaft collar. Once in place tighten 3/32" set screw.
2. Push and hold conveyor end down to reinstall the chain.

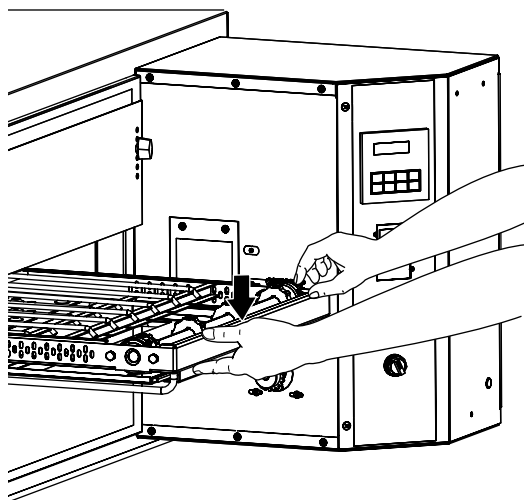


Figure 4-30.

3. The angle plate located on the underside of the conveyor must be against the lower end plug. This is true on both sides of oven.

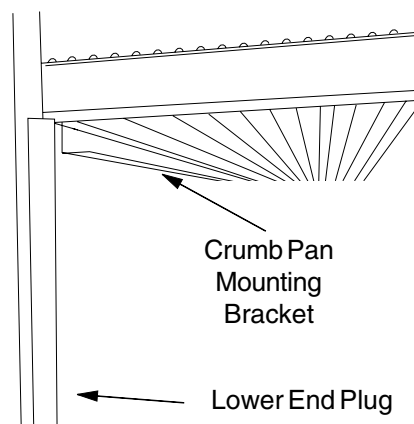


Figure 4-31.

SECTION 4 MAINTENANCE

4. Reattach conveyor guard to control panel and secure two screws.
5. Install both upper end plugs.

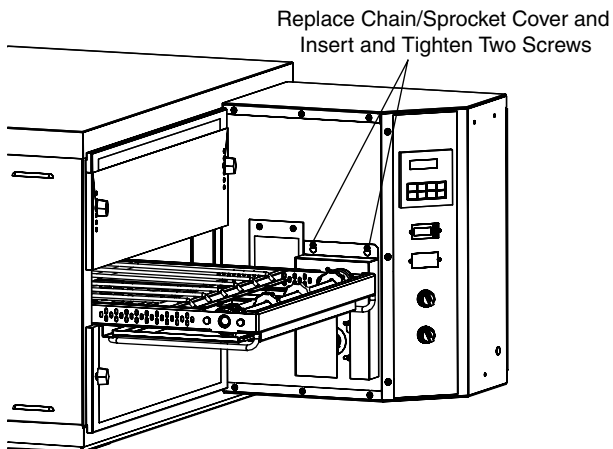


Figure 4-32.

IMPORTANT NOTICES:

- Installation of replacement parts requiring access to the interior of the oven is permitted only by an authorized service technician.
- If there are any problems with the operation of the oven, the authorized service technician must be called.
- It is suggested to obtain a service contract with a manufacturer's authorized service technician.

III. MAINTENANCE (3 and 6 MONTH)

WARNING

Shut OFF all electrical power and lock/tag out the switch before attempting maintenance work.

NOTE: It is recommended that the 3-month and 6-month maintenance items be performed by an authorized Middleby Marshall technician.

KEY SPARE PARTS KIT

Replacement parts can be purchased from your Middleby Marshall Authorized Parts Distributor.
Keeping these key parts on hand can prevent long downtime for your oven.

PS724-SERIES ELECTRIC OVEN KEY SPARE PARTS KIT

| ITEM | PART NO. | ENGLISH DESCRIPTION | QUANTITY |
|------|----------|--|----------|
| 1 | 44549 | Contact, 230V, Coil 85A | 1 |
| 2 | 59558 | Motor, Blower | 1 |
| 3 | 60520-2 | Thermocouple, Type "J" 2.00" (Temperature Control) | 2 |
| 4 | 45244 | Filter, RFI (380 VAC versions ONLY) | 1 |
| 5 | 60185 | Photoeye Sensor | 1 |
| 6 | 31504 | Transformer, 230V (P), 120V (S) 200V | 1 |
| 7 | 44696 | Switch, Rotary and Mounting Adapter | 3 |
| 8 | 44697 | Block, Contact | 3 |
| 9 | 48635 | Breaker, Circuit 240V 0.3A | 2 |
| 10 | 60598 | Switch, Air .13" WC | 1 |
| 11 | 60592 | Relay, DPDT 240VAC Coil | 1 |
| 12 | 44914 | Controller, PS555EL 208/240V | 1 |
| 13 | 44568 | Controller, PS555EL 380/480V | 1 Each |
| 14 | 97525 | Fan, Cooling 230V | 1 |
| 15 | 60085 | Assy, Blower Scroll PS624E | 2 |
| 16 | 60134 | Element,Htg 208V 7.2 KW PS724 | 1 |
| 16 | 60976 | Element,Htg 208V 8.7 KW PS724E | 1 |
| 16 | 61571 | Element,Htg 240V 7.2KW PS724 | 1 |
| 16 | 61132 | Element,Htg 240V 8.7KW PS724E | 1 |
| 16 | 60712 | Element,Htg 380V 7.2KW PS724 | 1 |
| 16 | 61030 | Element,Htg 380V 8.7 KW | 1 |
| 17 | 33983 | Control, Electric Hi-Limit 240V | 1 |
| 18 | 33812-8 | Thermocouple, Type "J" shielded 2.50 x 60 | 1 |
| 19 | 45019 | Breaker, Circuit 480VAC 63A 3Pole | 1 |
| 20 | 60058 | Inverter, Lenze 1/3 HP | 2 |
| 21 | 50990 | Control, Combo 4-20mA, Burst | 1 |
| 22 | 60542 | CNTRL, Conv Digital Hardened | 1 |
| 23 | 51067 | Motor, Conveyor Drive | 1 |
| 24 | 61185 | Relay, Time Delay DSQUAD3 | 1 |
| 25 | 61186 | Power Supply, 24 VDC 40W | 1 |
| 26 | 45036 | Breaker, Circuit 240V 3A | 2 |
| 27 | 48635 | Breaker, Circuit 240V 0.3A | 1 |
| 28 | 60947 | Thermostat, Snap Disc Man Reset | 1 |

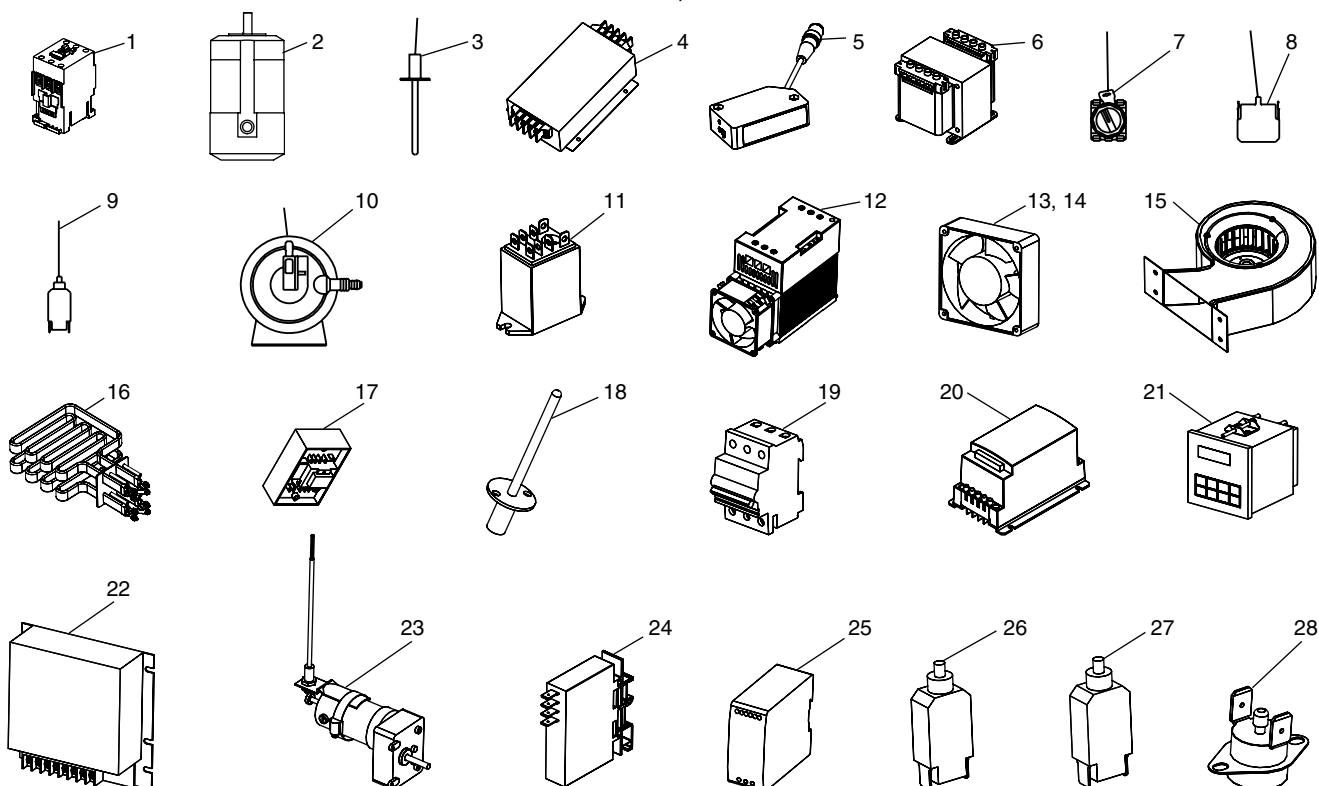
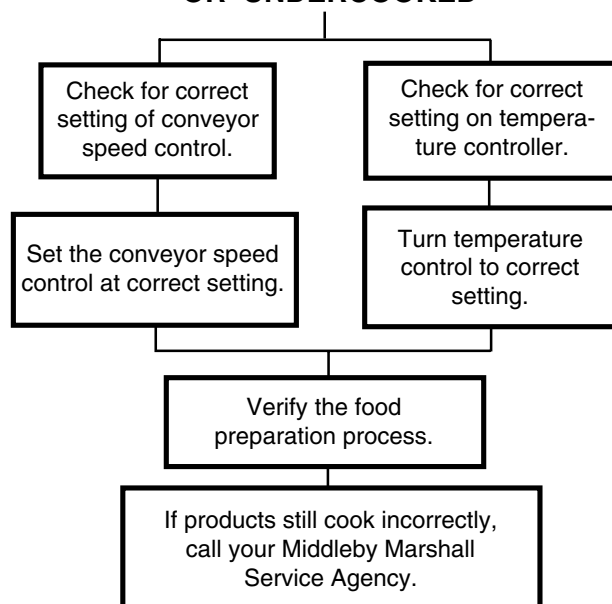


Figure 4-33.

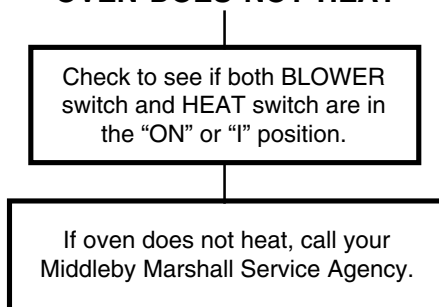
NOTES

SECTION 5 TROUBLESHOOTING

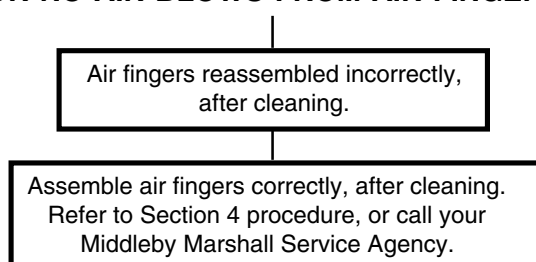
PROBLEM: PRODUCTS ARE OVERCOOKED OR UNDERCOOKED



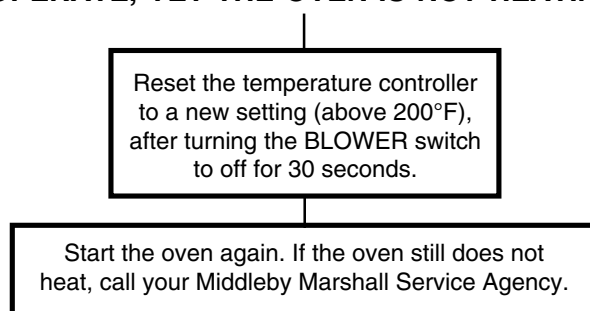
PROBLEM: OVEN DOES NOT HEAT



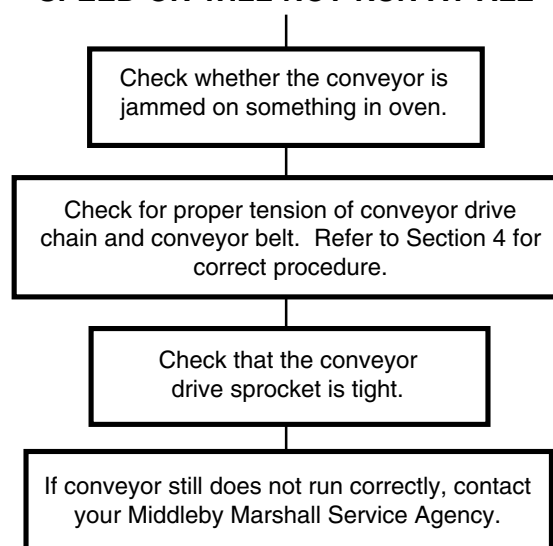
PROBLEM: BLOWER MOTOR IS RUNNING, YET LITTLE OR NO AIR BLOWS FROM AIR FINGERS



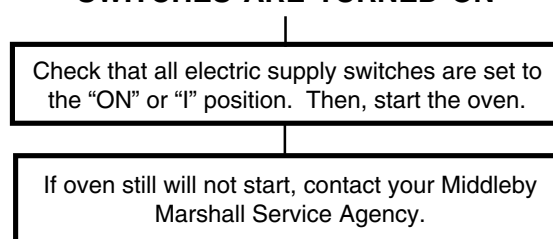
PROBLEM: OVEN BLOWER AND CONVEYOR OPERATE, YET THE OVEN IS NOT HEATING



PROBLEM: CONVEYOR WILL NOT HOLD PROPER SPEED OR WILL NOT RUN AT ALL

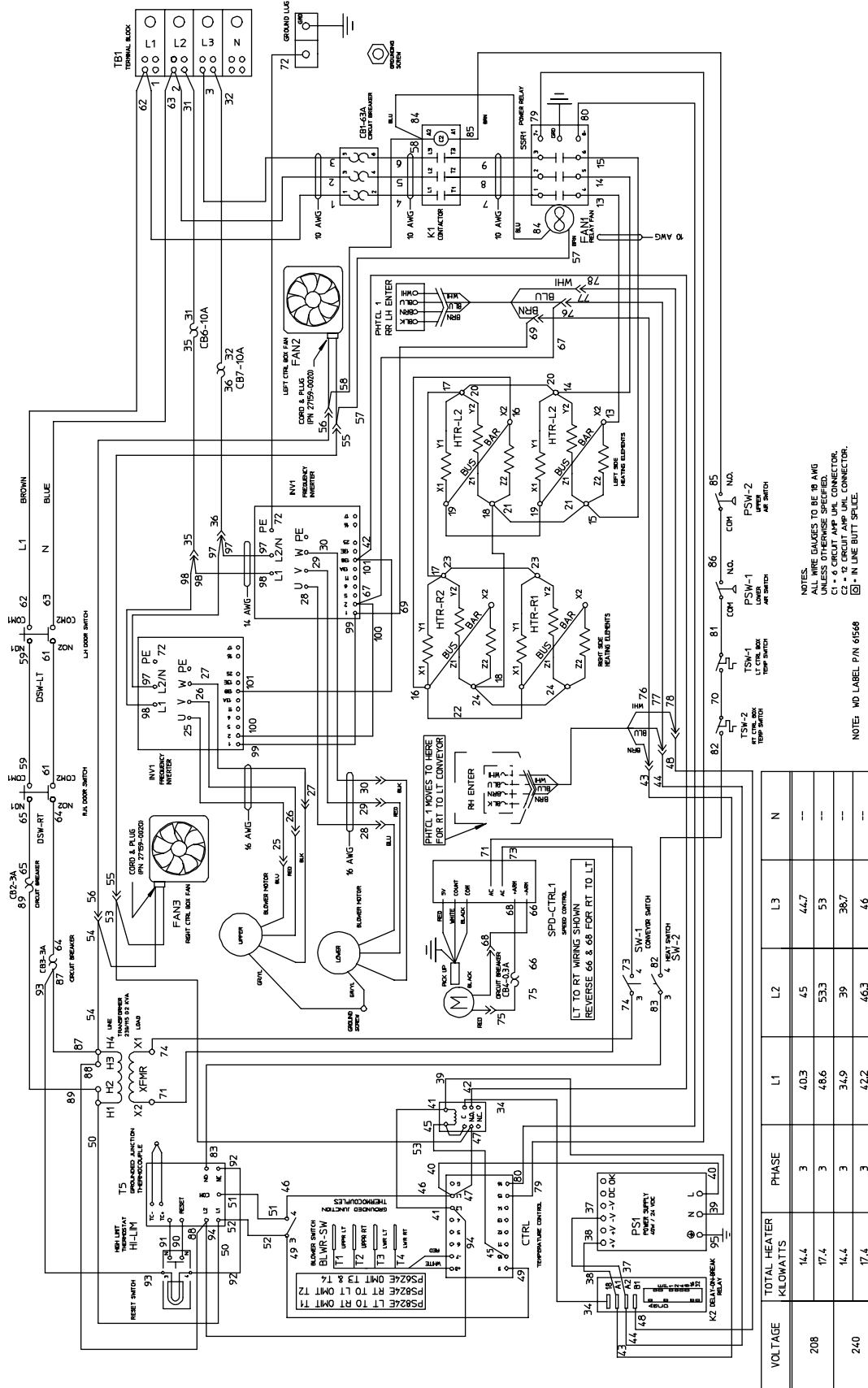


PROBLEM: OVEN DOES NOT TURN ON WHEN ITS SWITCHES ARE TURNED ON



NOTES

SECTION 6 ELECTRICAL SCHEMATICS

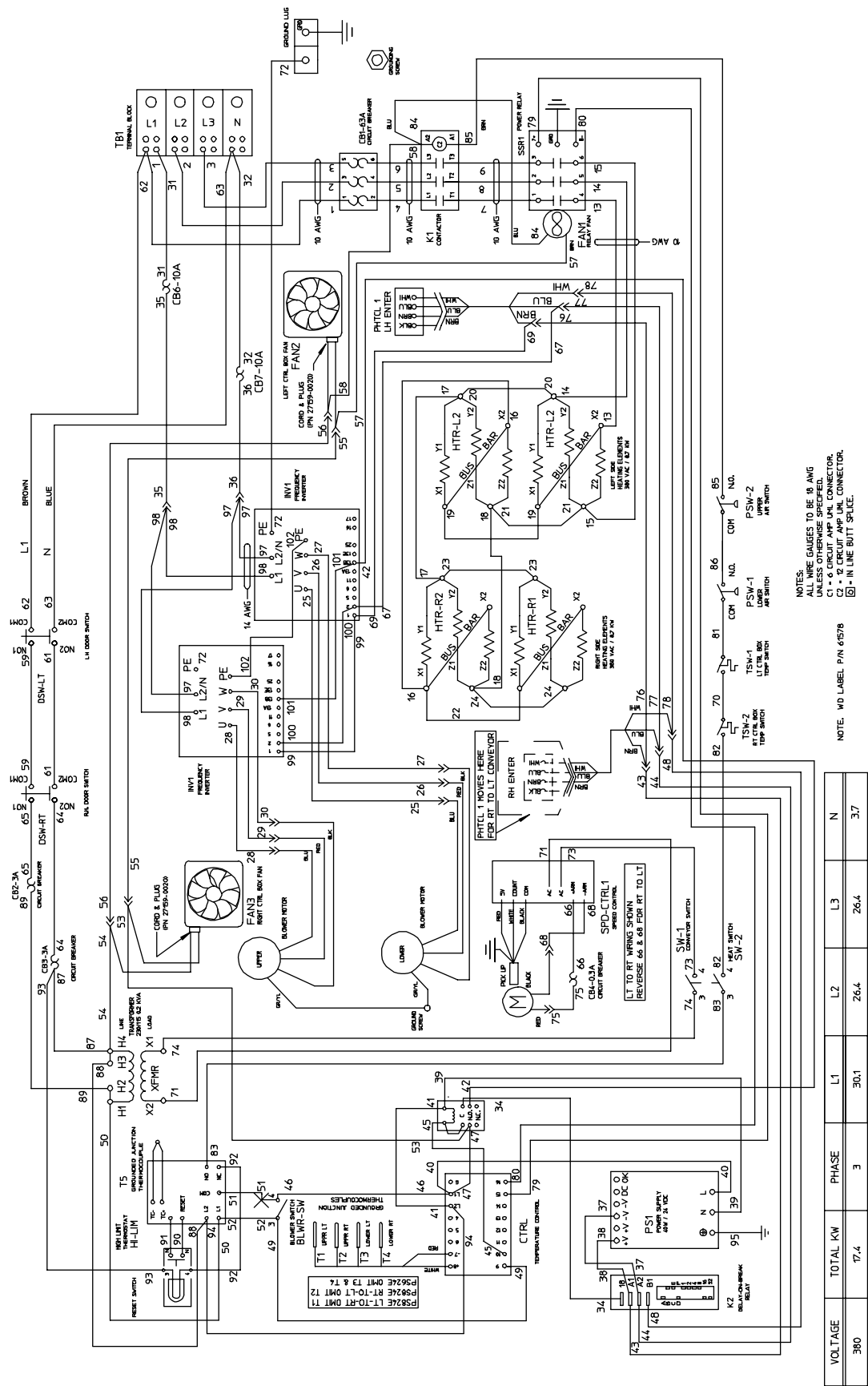


| VOLTAGE | TOTAL HEATER KILOWATTS | PHASE | L1 | L2 | L3 | N |
|---------|------------------------|-------|------|------|------|-----|
| 208 | 14.4 | 3 | 40.3 | 45 | 44.7 | --- |
| 240 | 17.4 | 3 | 48.6 | 53.3 | 53 | --- |
| | 14.4 | 3 | 34.9 | 39 | 38.7 | --- |
| | 17.4 | 3 | 42.2 | 46.3 | 46 | --- |

Wiring Diagram, E208-240V, PS724E

61567B

SECTION 6
ELECTRICAL SCHEMATICS

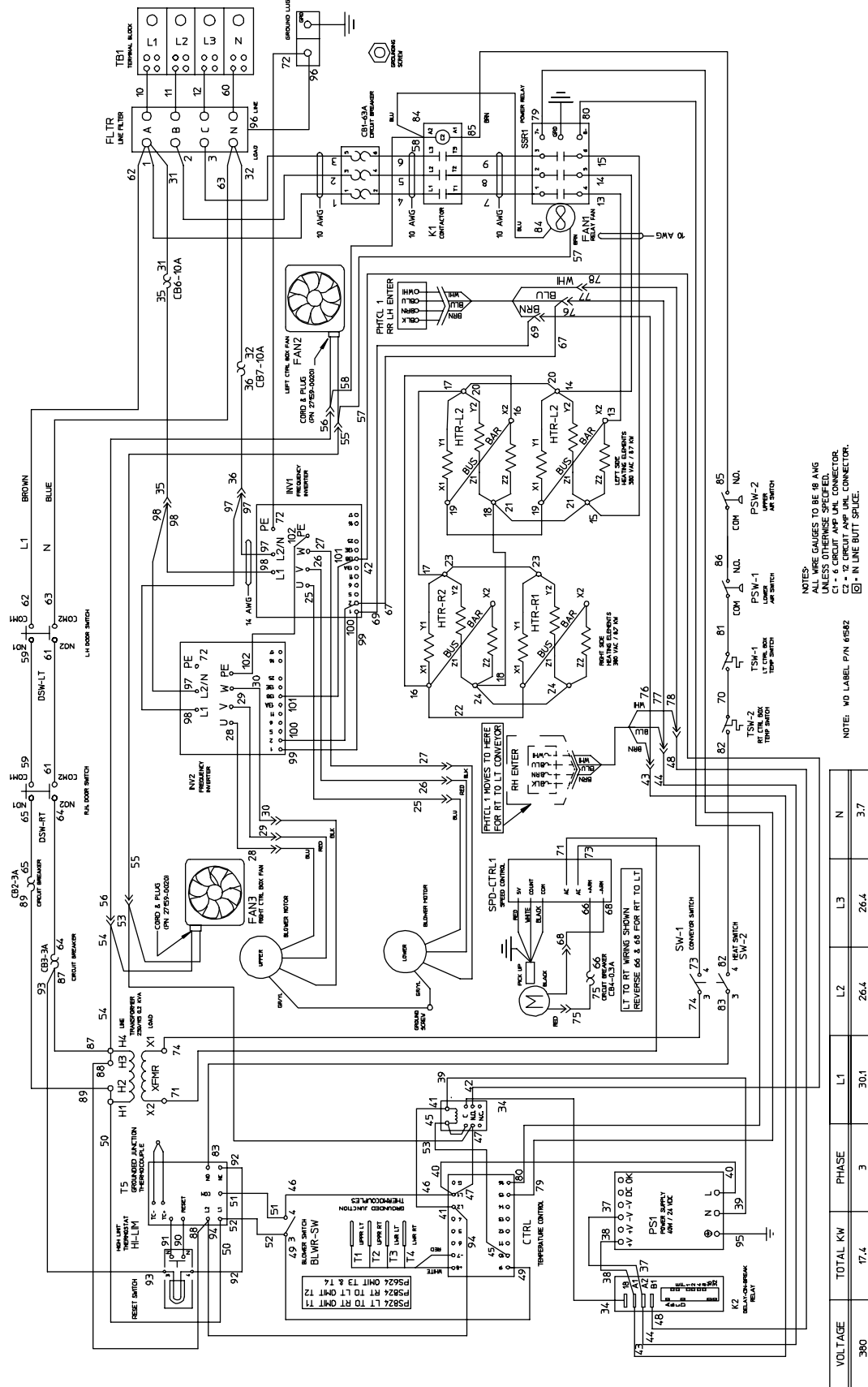


61577B

Wiring Diagram, E380V 17.44 kW, PS724E

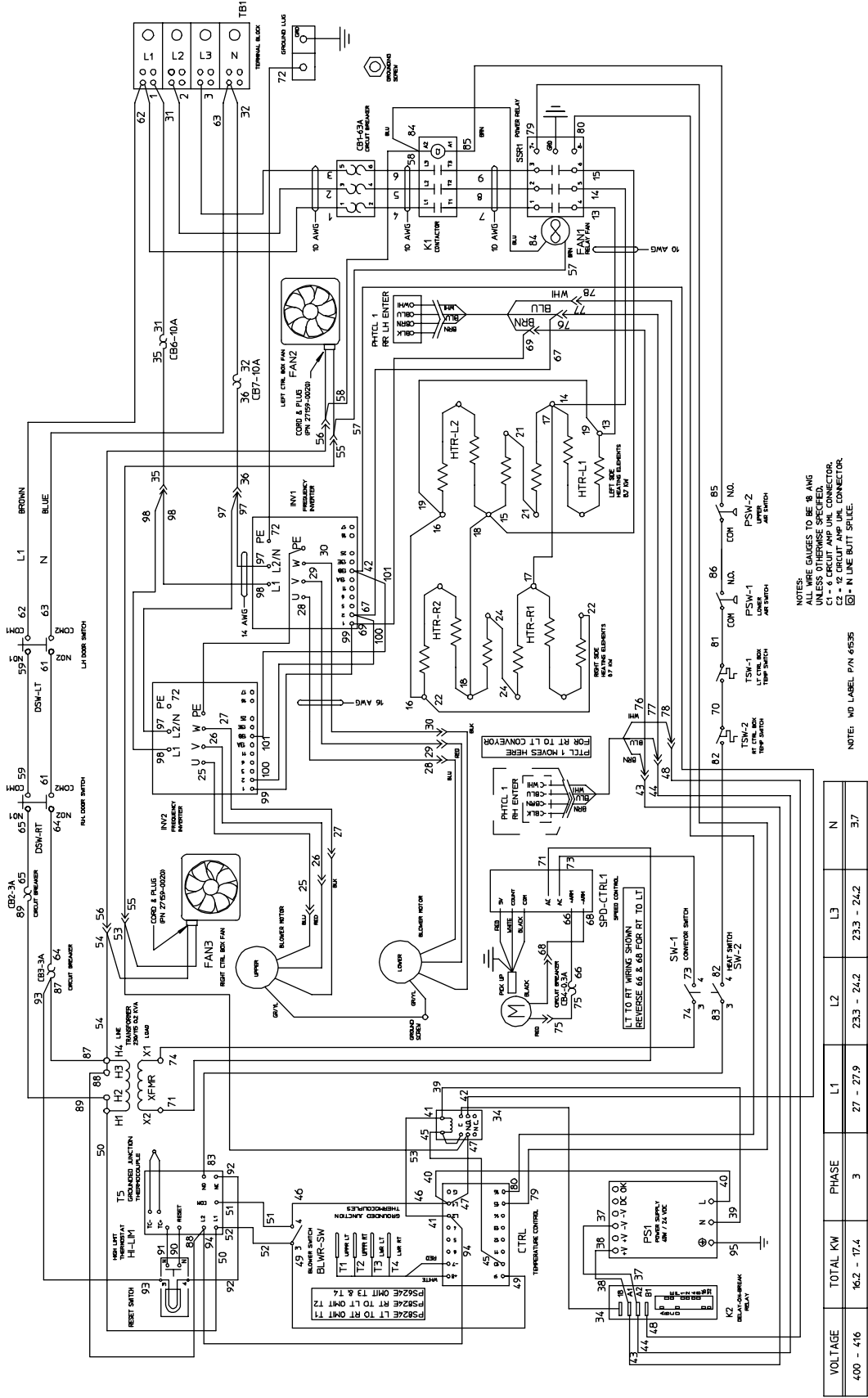
61581B

Wiring Diagram, E380V 17.4 kW, PS724E CE



NOTES:
ALL WIRE GAUGES TO BE 18 AWG
UNLESS OTHERWISE SPECIFIED
C - 12 CIRCUIT AMP/1 IN. CONDUCTOR
C - 12 CIRCUIT AMP/1 IN. CONDUCTOR
C - 12 CIRCUIT AMP/1 IN. CONDUCTOR
C - 12 CIRCUIT AMP/1 IN. CONDUCTOR

SECTION 6
ELECTRICAL SCHEMATICS



61534B

Wiring Diagram, 400-416V 4 kW, PS724E7

NOTES

WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

NOTICE

During the warranty period, ALL parts replacement and servicing should be performed by your Middleby Marshall Authorized Service Agent. Service that is performed by parties other than your Middleby Marshall Authorized Service Agent may void your warranty.

NOTICE

Using any parts other than genuine Middleby Marshall factory manufactured parts relieves the manufacturer of all warranty and liability.

NOTICE

Middleby Marshall reserves the right to change specifications at any time.



Commercial Food Equipment Service Association

Middleby is proud to support the Commercial Food Equipment Service Association (CFESA). We recognize and applaud CFESA's ongoing efforts to improve the quality of technical service in the industry.

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